

US EPA RECORDS CENTER REGION 5



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Monthly Oversight Report 15  
ACS NPL Site  
Griffith, Indiana  
March 2, 2002 - March 29, 2002



# BLACK & VEATCH

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Black & Veatch Special Projects Corp.

USEPA/RAC VII  
American Chemical Services RAO (057-ROBF-05J7)

BVSPC Project 46526  
BVSPC File C.3  
April 4, 2002

Mr. Kevin Adler  
U.S. Environmental Protection Agency  
77 W. Jackson Boulevard (SR-6J)  
Chicago, Illinois 60604-3590

✓ KA  
4/11/02

Subject: Monthly Oversight Summary Report  
No. 15 for March 2002

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 15 for March 2002 for the American Chemical Services Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email ([campbelllm@bv.com](mailto:campbelllm@bv.com)).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell, P.E.  
Site Manager

Enclosure

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**Monthly Oversight Summary Report No. 15**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Month of March (March 2, 2001 - March 29, 2002)

**BVSPC O/S Dates:** March 7, 8, 12, 14, 19, 21, 26, and 28, 2002.

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	7	Respondent's General Contractor
U.S. Environmental Protection Agency	1	
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Austgen	3	Electrical Contractor
Ryan Construction	2	General Contractor
Durr Environmental, Inc.	1	Thermal Oxidizer and Scrubber Contractor
Bingham Environmental Technologies, Inc.	1	Air Monitoring Equipment Supplier
Mid-America Drilling	2	Drilling Contractor
Heritage Industrial Services	1	OFCA ISVE Yard Piping Contractor

**Construction Activities**

**Major Activities:**

- Durr Environmental, Inc. continued testing the thermal oxidizer and scrubber system and coordinated the system controls with Austgen.
- Austgen installed the Off-Site Containment Area in-situ soil vapor extraction system programmable logic controller and continued to test the control system interlocks.
- Ryan Construction replaced flanges on the scrubber, reconfigured the scrubber overflow, and installed a flow meter on the thermal oxidizer.
- Bingham Environmental Technologies, Inc. performed a training class for Montgomery Watson Harza on its flame-ionization and photo-ionization detectors.
- Montgomery Watson Harza redeveloped monitoring well MW-17.

- Montgomery Watson Harza performed the semi-annual groundwater sampling event.
- Montgomery Watson Harza abandoned monitoring well MW-18 and piezometers P61 and P62.
- Heritage Industrial Services began preparations to remove water from Off-Site Containment Area in-situ soil vapor extraction system well SVE-7 yard piping.
- Montgomery Watson Harza held weekly construction coordination meetings at the site on March 7, 14, 21, and 28, 2002.

#### **Activities Performed:**

Black & Veatch Special Projects Corp. (BVSPC) spoke with Chris Daly of MWH on March 7, 2002, regarding BVSPC's questions about the initial start-up and testing procedures for the Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) system. MWH scheduled the official OFCA ISVE system start-up for April 1, 2002, and will conduct system monitoring in accordance with the Performance Standard Verification Plan at that time.

Durr Environmental, Inc. (Durr) returned to the site on March 4, 2002, to continue troubleshooting the scrubber system. On March 12, 2002, BVSPC observed MWH operate the OFCA blower, sending ambient air to the thermal oxidizer and scrubber system. Once MWH and Durr determined that the system was connected and working properly, MWH opened the headers and gate valves to the wells identified in MWH's memorandum *ACS Off-Site ISVE System Test-Out Procedures*, dated February 25, 2002. MWH then slowly reduced the amount of the ambient air sent to the thermal oxidizer. MWH monitored the blower shed with the flame-ionization detector (FID) and photo-ionization detector (PID). MWH observed readings of approximately 20 ppm and 0.5 ppm on the FID and PID, respectively, at some of the joints upstream and downstream of the blower. MWH suspected that the sealant on the joints was heating, potentially releasing vapors, causing the elevated readings on the FID and PID. MWH reported that it did not observe any leakage around the joints.

As MWH closed the ambient air valve, a higher concentration of vapors was sent to the thermal oxidizer, causing it to exceed its high level operating temperature of 1800°F. The thermal oxidizer immediately shut down. At that point, the pressure in the line upstream of the thermal oxidizer increased, triggering the pressure release valve in the OFCA blower shed to open. MWH immediately turned off the blower and allowed the blower shed to vent vapors that were released from the valve. Durr brought the thermal oxidizer back on-line at the operating temperature, and MWH sent ambient air to the thermal oxidizer. MWH proceeded to reduce the number of wells on-line and close the ambient air valve. MWH and Durr continued to test the system and were able to pull some vapors from all of the Group 1 wells to the thermal oxidizer. MWH took field measurements at the blower shed and thermal oxidizer and scrubber system in accordance with the Test-Out Procedures. MWH sampled the VOCs in the wells with the FID. MWH reported that the FID readings at the designated wells spiked at greater than 50,000 ppm (upper limit of the equipment), except for SVE-27. FID readings at SVE-27 were 6.7 ppm. Durr reported that the thermal oxidizer was operating at 1675°F and the natural gas was not necessary to maintain the temperature in the combustion chamber.

MWH reported that it operated the OFCA blower and thermal oxidizer overnight on Wednesday, March 13, 2002. The Durr representative reported that he checked the status of the system at approximately midnight on Wednesday evening. When the site opened on Thursday, March 14, 2002, MWH discovered that the OFCA blower and thermal oxidizer were no longer operating, possibly because of a power outage. MWH observed that the liquid effluent from the overflow pipe on the scrubber was dissolving the concrete. MWH tested the pH of the liquid with litmus paper and determined that the pH was 1. MWH placed cones around the area of impact and flushed the area with water. MWH and Durr found that the cause of the acidic water was because the caustic pump was not energized. MWH energized the pump and fed caustic to the scrubber tank in order to neutralize the acidic water. MWH raised the pH of the liquid to 7 and tested the pH with litmus paper. Durr ordered replacement pH and conductivity probes.

Ryan Construction disassembled the scrubber to determine if damage to the parts had occurred when the pH of the liquid dropped to 1. Ryan Construction also replaced additional leaking gaskets and sealants on the scrubber unit that had been installed by the manufacturer. Replacement pH probes and repairs to the pump were installed. Ryan Construction reconfigured the scrubber overflow system in order to minimize liquid escaping the scrubber tank. Ryan Construction also installed a flow meter in the natural gas line on the thermal oxidizer for MWH to monitor the natural gas usage.

MWH reported that Austgen delivered the programmable logic controller (PLC) for the OFCA blower shed on March 15, 2002. Austgen installed the PLC and began testing the interlocks with the thermal oxidizer and scrubber system. Austgen also installed a bypass control in the OFCA blower shed control room so that the portion of the shed that contains the ISVE well header system could be ventilated without entering the shed.

On Tuesday, March 26, 2002, Ryan Construction installed a recycle line from the GWTP discharge effluent tank to the scrubber system. When Ryan Construction began removing a flange on the scrubber unit, it realized that the water level in the scrubber reservoir was higher than the flange connection and the water needed to be purged prior to continuing with the removal of the flange. MWH opened the purge valve and the liquid in the reservoir began flowing to the floor sump that leads to the GWTP. Ryan tested the pH of the liquid from the reservoir with litmus paper and observed that the pH of the liquid was 12. MWH donned gloves and began flushing the area with clean water. Ryan Construction later donned gloves in order to complete its work on connecting the recycle line.

Durr installed replacement conductivity and pH probes in the scrubber system on the evening of March 26, 2002. MWH and Durr began operating the thermal oxidizer and scrubber system on Tuesday evening with ambient air. During the operation of the scrubber, MWH and Durr observed that the pH of the scrubber liquid continued to rise. The pH then fell to a level of 5 and the pH probe produced an error message. MWH and Durr ceased operating the thermal oxidizer and scrubber system. MWH later determined that the check valve on the caustic pump was unable to close because of debris in the valve. MWH believed that a siphoning action in the piping to the caustic solution caused the continued addition of caustic to the scrubber reservoir while the caustic pump was not operating. Durr determined that the pH probe was damaged; however, the conductivity probe had not been damaged from the alkalinity of the liquid.

MWH reported that Durr was scheduled to return to the site on April 1, 2002, to replace damaged parts on the scrubber and provide training to MWH employees on the thermal oxidizer and scrubber system. Rosemount, the manufacturer of the pH probe, was scheduled to be on-site on April 1, 2002, to assess the problems with the pH probes.

Bingham Environmental Technologies, Inc. demonstrated how to use the FID and PID for MWH employees on March 12, 2002. MWH will use this equipment to perform air monitoring of the OFCA ISVE system in accordance with the Performance Standard Verification Plan.

Heritage Industrial Services (HIS) and Patrick Engineering (Patrick) arrived at the site on March 21, 2002, in order to perform compaction testing of the OFCA cover in locations where the ISVE yard piping was installed in December 2001. MWH reported that HIS and Patrick were not scheduled to be at the site, and as such, the MWH engineering staff were not present to record the locations of the compaction testing. HIS and Patrick are scheduled to perform compaction testing on April 2, 2002. A representative from HIS was on-site on March 28, 2002, to determine the equipment required to remove the water from SVE-7 yard piping and pressure test the line. HIS was scheduled to return to the site on April 1, 2002, to begin work.

MWH reported that it began operating the GWTP at 38 gpm and increased the rate to 45 gpm at the end of the month. MWH pumped from extraction wells EW-10, EW-11, EW-12, EW-15, EW-16, EW-17, EW-18, EW-19, EW-19A, and EW-20, the Perimeter Groundwater Containment System, and monitoring well MW56. MWH observed an increased treatment efficiency in the Activated Sludge Tank. MWH reported that it may insulate the GWTP Activated Sludge Tank this summer in order to increase the treatment efficiency of the tank during the colder months.

MWH and BVSPC discussed the sampling equipment stored in the GWTP. BVSPC informed MWH that the soil samples were not generated by BVSPC during its previous split sampling activities. MWH decided that it will dispose of the samples appropriately. Two potential options include disposing of the soil in MWH's hazardous waste roll-off box or placing the material underneath the OFCA cover during scheduled maintenance activities.

MWH conducted the semi-annual groundwater sampling event in accordance with the *Draft Revised Long-Term Groundwater Monitoring Plan* (DRLTGMP). The sampling event consisted of measuring water levels on Monday, March 18, 2002. MWH overlooked measuring the water level at P105 on Monday and measured the water level at P105 on Tuesday, March 19, 2002. MWH collected samples at 32 monitoring wells for volatile organic compounds, 3 wells for the semivolatile organic compound bis(2-chloroethyl)ether, and 3 wells for arsenic.

MWH redeveloped monitoring well MW-17 on March 12, 2002. Mid-America Drilling abandoned piezometers P61 and P62 and monitoring well MW18 on March 26, 2002, by filling the piezometers with bentonite grout. P62 had been damaged and was filled with soils to approximately 4 feet below ground surface. MWH instructed Mid-America Drilling to fill the remaining void in the piezometer with bentonite grout. Prior to beginning abandonment activities at MW-18, Mid-America Drilling probed the well with

a tremie pipe to the depth of the well. MWH then measured the depth of the well with a tape and found that there was no longer an obstruction in the well; however, MWH decided to continue with the abandonment of MW-18. Mid-America Drilling filled the well with bentonite pellets and used the tremie pipe to ensure that bridging did not occur. Mid-America Drilling then removed the concrete and cover for the well, hydrated the bentonite pellets, and backfilled the depression. MWH reported that it scheduled to replace piezometers P93 and P94 during the On-Site Containment Area ISVE well installation activities scheduled for the fall of 2002.

Attached are BVSPC weekly reports No. 53 through 56, correspondence, log book notes, and photographs of the daily activities. BVSPC's crew conducted oversight of the major field activities on March 7, 8, 12, 14, 19, 21, 26, and 28, 2002. BVSPC's crew attended four weekly construction coordination meetings at the site on March 7, 14, 21, and 28, 2002.

**Topics of Concern:**

- MWH was unable to obtain a groundwater elevation at monitoring well MW-18 due to debris in the well. MW-18 is part of the long term monitoring program.
- The residential well located at 1007 Reder Road could not be sampled because the pump was not operating. This well is part of the long term monitoring program.

**Concern Resolution:**

- MWH proposed to replace MW-18 with MW-17 in the *Revised Long-Term Groundwater Monitoring Plan*. MWH abandoned MW-18 in accordance with the Indiana Administrative Code on March 26, 2002.

**Upcoming Activities:**

- Durr to replace the scrubber pH probe and provide training to MWH on the thermal oxidizer and scrubber system.
- Rosemont to assess the cause of failure on the pH probes.
- MWH to resume pulling vapors from the OFCA ISVE system and begin system operation.
- HIS to remove water from OFCA ISVE well SVE-7 yard piping.
- Patrick and HIS to perform compaction testing of OFCA cover on April 2, 2002.

Signature: Leigh Peters

Date: April 4, 2002

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**Weekly Oversight Summary Report No. 53**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of March 4, 2002

**BVSPC O/S Dates:** March 7 and 8, 2002 (Ms. Peters)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	3	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Ryan Construction	1	General Contractor
Durr Environmental, Inc.	1	Thermal Oxidizer and Scrubber Contractor

**Construction Activities**

**Major Activities:**

- Ryan Construction replaced leaking gaskets on the scrubber flanges.
- Durr Environmental, Inc. returned to the site to continue testing the thermal oxidizer and scrubber system.
- Austgen continued developing the control logic for the Off-Site Containment Area in-situ soil vapor extraction system.
- Montgomery Watson Harza held the weekly construction coordination meeting.

**Activities Performed:**

Ryan Construction replaced additional leaking gaskets and sealants on the scrubber unit. Montgomery Watson Harza (MWH) reported that Durr Environmental, Inc. (Durr) returned to the site on March 4, 2002, to continue troubleshooting the scrubber system. Durr tested the connections between the thermal oxidizer and scrubber and operated the thermal oxidizer at its design temperature. Durr also calibrated the pH and conductivity probes. Durr reported that it would start bringing vapors into the thermal oxidizer and scrubber system from the Off-Site Containment Area (OFCA) on March 8, 2002; however, Durr encountered problems with the low-level pressure transducer on the scrubber unit and postponed pulling vapors until March 11, 2002.

Black & Veatch Special Projects Corp. (BVSPC) spoke with Chris Daly of MWH on March 7, 2002, regarding BVSPC's questions about the initial start-up and testing procedures for the OFCA in-situ soil vapor extraction (ISVE) system. MWH scheduled the official OFCA ISVE system start-up for April 1, 2002, and will conduct system monitoring in accordance with the Performance Standard Verification Plan at that time.

MWH reported that the groundwater treatment plant (GWTP) was operating at 38 gpm and pumping from extraction wells EW-10, EW-11, EW-15, EW-16, EW-17, EW-19, and EW-19A, the Perimeter Groundwater

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Containment System, and monitoring well MW56. MWH ceased pumping from EW-12, from which MWH sampled and determined that EW-12 was contributing the majority of the acetone to the GWTP. MWH previously reported that it exceeded its discharge effluent requirement for acetone in the January compliance sample. MWH reported that it may insulate the GWTP Activated Sludge Tank this summer in order to increase the treatment efficiency of the tank during the colder months.

MWH and BVSPC discussed the sampling equipment stored in the GWTP. BVSPC informed MWH that the soil samples were not generated by BVSPC during its previous split sampling activities. MWH decided that it will dispose of the samples appropriately. Two potential options include disposing of the soil in MWH's hazardous waste roll-off box or placing the material underneath the OFCA cover during scheduled maintenance activities.

MWH scheduled to redevelop monitoring well MW-17 on March 12, 2002. MWH postponed the abandonment of monitoring well MW-18 and piezometers P61 and P62 until March 26, 2002, in order for the property owner to observe the abandonment of MW-18. MWH reported that it scheduled to replace piezometers P93 and P94 during the On-Site Containment Area ISVE well installation activities scheduled for the fall of 2002. MWH scheduled the March 2002 groundwater sampling event for the week of March 18, 2002. MWH will conduct the sampling event in accordance with the *Draft Revised Long-Term Groundwater Monitoring Plan (DRLTGMP)*.

MWH held the weekly construction coordination meeting at the site on March 7, 2002.

**Topics of Concern:**

- MWH was unable to obtain a groundwater elevation at monitoring well MW-18 due to debris in the well. MW-18 is part of the long term monitoring program.
- The residential well located at 1007 Reder Road could not be sampled because the pump was not operating. This well is part of the long term monitoring program.

**Concern Resolution:**

- MWH proposed to replace MW-18 with MW-17 in the *Draft Revised Long-Term Groundwater Monitoring Plan*. MWH scheduled to abandon MW-18 in accordance with the Indiana Administrative Code on March 26, 2002.

**Upcoming Activities:**

- Austgen to complete the control logic for the OFCA ISVE system.
- MWH and Durr to begin pulling vapors from the OFCA ISVE system.
- MWH to remove water from OFCA ISVE well SVE-7 yard piping.
- MWH to redevelop MW-17 on March 12, 2002.
- MWH to conduct the March 2002 groundwater sampling event during the week of March 18, 2002.
- MWH to abandon MW18, P61, and P62 on March 26, 2002.

Signature: Leigh Peters

Date: March 14, 2002

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**WEEKLY CONSTRUCTION MEETING AGENDA  
FOR MARCH 7, 2002 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** March 7, 2002

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**TOPICS:**

Health and Safety Summary

GWTP Status

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

- Durr on site this week to continue oxidizer/scrubber system testing/setup.
- Austgen Electric and Ryan Construction performing various tasks on system.
- Austgen is continuing to work on the PLC for the blower shed. Anticipated installation March 18.
- Anticipated schedule

Groundwater Sampling

- Well abandonment/piezometer replacement installation scheduled for \_\_\_\_\_.

Looking Ahead

Week of...	Task
March 11	<ul style="list-style-type: none"><li>• Well abandonment/ replacement installation</li><li>• Continue ThermOx system testing</li><li>• ISVE system testout</li></ul>
March 18	<ul style="list-style-type: none"><li>• March sampling event</li><li>• SVE PLC installation</li></ul>
March 25	
April 1	

Next Weekly Construction Meeting

- Thursday, March 14, 2002

**SIGN IN SHEET**  
**WEEKLY CONSTRUCTION MEETING**  
**MARCH 7, 2002**

Name	Company	Fax Number
<u>TOM ILLIUS</u>	<u>MWH</u>	<u>219-924-4561</u>
<u>Leigh Peters</u>	<u>BVSPC</u>	<u>312-346-4781</u>
<u>Chris Daly</u>	<u>MWH</u>	<u>630-836-8959</u>
<u>LEE OROSZ</u>	<u>MWH</u>	
<u>Travis Kung'ora</u>	<u>MWH</u> (via phone)	
<u>PETE VAUT</u>	<u>MWH</u> (via phone)	
<u>KEVIN ADLER</u>	<u>USEPA</u> <del>ADLER</del> (via phone)	
<u>JEAN GRADY</u>	<u>IDEM</u> (via phone)	
<u>Chad Smith</u>	<u>MWH</u> (via phone)	

**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR MARCH 7, 2002 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** March 7, 2002

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**ATTENDEES:** Tom Tinics – MWH  
Lee Orosz – MWH  
Chris Daly – MWH  
Leigh Peters – BVSPC  
Peter Vagt – MWH (via phone)  
Travis Klingforth – MWH (via phone)  
Chad Smith – MWH (via phone)  
Kevin Adler – U.S. EPA (via phone)  
Sean Grady – IDEM (via phone)

**TOPICS:**

Health and Safety Summary

No health and safety incidents have occurred since the last meeting on February 28. Smaller-sized safety glasses have been made available for visitors. Bingham Environmental Instruments is scheduled to conduct training on how to use the flame ionization detector (FID) on March 12 starting at 10:00 a.m.

Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating at 38 gallons per minute (gpm) from the PGCS, and extraction wells EW-10, EW-11, EW-15, EW-16, EW-17, EW-19, and EW-19A. The pumping rate at On-Site Area extraction well EW-17 has been increased to approximately 10 gpm. Currently, extraction well EW-12 is not active because it contains high levels of acetone. It will begin pumping again when the weather becomes warmer and GWTP Activated Sludge Plant efficiencies improve. Chemical Oxygen Demand (COD) levels in the carbon vessels effluent stream indicate normal treatment operation.

A revised version of the GWTP Operations and Maintenance Manual is available on site. Included in the revision are three new volumes (volumes 9, 10, and 11) that include information concerning additional equipment and updated As-built drawings that include details of the plant upgrades. As-built drawings will be completed by June 30. Copies of the revised material can be provided upon request.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

Durr Engineering is currently on site to continue the oxidizer/scrubber system testing and startup. Austgen Electric and Ryan Construction have been available to assist Durr in performing various tasks integral to the startup process. These tasks included replacing gaskets on the scrubber flanges, rewiring the chart recorder and installing an additional input card on the programmable logic control (PLC).

Austgen Electric continues to assemble the PLC for the Off-Site Area Blower Shed in their shop. Austgen is scheduled to deliver it on March 18.

Groundwater Sampling

The redevelopment of MW-17 is scheduled for March 12, prior to the March 2002 groundwater sampling round.

Monitoring well MW-18, located in the yard of the home at 1009 Reder Road, will be abandoned after the owner can be contacted. Currently, a car is parked adjacent to the well and will need to be moved to allow access for the drill rig. If necessary, the abandonment may be scheduled for March 25. The abandonment of piezometers P-61 and P-62 will be scheduled for the same day.

*(Update: since the weekly construction meeting, MWH has been able to contact the owner of 1009 Reder Road. MW-18 is scheduled to be abandoned on March 26, 2002).*

The March 2002 sampling event is scheduled for the week of March 18.

Looking Ahead

Week of...	Task
March 11	<ul style="list-style-type: none"><li>Well abandonment/ replacement installation</li><li>Continue Thermal Oxidizer system testing</li><li>ISVE system testout</li></ul>
March 18	<ul style="list-style-type: none"><li>March sampling event</li><li>ISVE Blower Shed PLC Installation</li></ul>
March 25	<ul style="list-style-type: none"><li></li></ul>
April 1	<ul style="list-style-type: none"><li>ISVE System Startup</li></ul>

Next Weekly Construction Meeting

- Thursday, March 14, 2002

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**Weekly Oversight Summary Report No. 54**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of March 11, 2002

**BVSPC O/S Dates:** March 12 and 14, 2002 (Ms. Peters)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	7	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Durr Environmental, Inc.	1	Thermal Oxidizer and Scrubber Contractor
Austgen	2	Electrical Contractor
Bingham Environmental Technologies, Inc.	1	Air Monitoring Equipment Supplier
Ryan Construction	1	General Contractor

**Construction Activities**

**Major Activities:**

- Durr Environmental, Inc. operated the thermal oxidizer and scrubber system with vapors from the Off-Site Containment Area in-situ soil vapor extraction system.
- Austgen delivered the programmable logic controller for the Off-Site Containment Area in-situ soil vapor extraction system.
- Bingham Environmental Technologies, Inc. provided a training class for Montgomery Watson Harza on its flame-ionization and photo-ionization detectors.
- Montgomery Watson Harza redeveloped monitoring well MW-17.
- Montgomery Watson Harza held the weekly construction coordination meeting.

**Activities Performed:**

Montgomery Watson Harza (MWH) reported that Durr Environmental, Inc. (Durr) completed repairs to the low-level pressure transducer for the scrubber reservoir. On March 12, 2002, Black & Veatch Special Projects Corp. (BVSPC) observed MWH operate the Off-Site Containment Area (OFCA) blower, sending ambient air to the thermal oxidizer and scrubber system. Once MWH and Durr determined that the system was connected and working properly, MWH opened the headers and gate valves to the wells identified in MWH's memorandum *ACS Off-Site ISVE System Test-Out Procedures*, dated February 25, 2002. MWH then slowly reduced the amount of the ambient air sent to the thermal oxidizer. MWH monitored the blower shed with the flame-ionization detector (FID) and photo-ionization detector (PID).

MWH observed readings of approximately 20 ppm and 0.5 ppm on the FID and PID, respectively, at some of the joints upstream and downstream of the blower. MWH suspected that the sealant on the joints was heating, potentially releasing vapors, causing the elevated readings on the FID and PID. MWH reported that it did not observe any leakage around the joints.

As MWH closed the ambient air valve, a higher concentration of vapors was sent to the thermal oxidizer, causing it to exceed its high level operating temperature of 1800°F. The thermal oxidizer immediately shut down. At that point, the pressure in the line upstream of the thermal oxidizer increased, triggering the pressure release valve in the OFCA blower shed to open. MWH immediately turned off the blower and allowed the blower shed to vent vapors that were released from the valve. Durr brought the thermal oxidizer back on-line at the operating temperature, and MWH sent ambient air to the thermal oxidizer. MWH proceeded to close the gate valves to 5 of the 7 Group 1 wells. While in constant communication through telephones with the Durr representative at the thermal oxidizer, MWH began closing the ambient air valve. MWH and Durr continued to test the system and were able to pull some vapors from all of the Group 1 wells to the thermal oxidizer. MWH then took field measurements at the blower shed and thermal oxidizer and scrubber system in accordance with the Test-Out Procedures. MWH sampled the VOCs in the wells with the FID. MWH reported that the FID readings at the designated wells spiked at greater than 50,000 ppm (upper limit of the equipment), except for SVE-27. FID readings at SVE-27 were 6.7 ppm. Durr reported that the thermal oxidizer was operating at 1675°F with only two wells on-line and the natural gas was not necessary to maintain the temperature in the combustion chamber.

MWH reported that it operated the OFCA blower and thermal oxidizer overnight on Wednesday, March 13, 2002. The Durr representative reported that he checked the status of the system at approximately midnight on Wednesday evening. When the site opened on Thursday, March 14, 2002, MWH discovered that the OFCA blower and thermal oxidizer were no longer operating. MWH attributed the system shut down to a power loss in both the OFCA and the groundwater treatment plant (GWTP). MWH observed that the liquid effluent from the overflow pipe on the scrubber was dissolving the concrete. MWH tested the pH of the liquid with litmus paper and determined that the pH was 1. MWH placed cones around the area of impact and flushed the area with water. The overflow flows directly into a sump which is connected to the GWTP. MWH and Durr investigated the cause of the acidic water. Durr reported that the low level pH alarm was set to 4. When the pH of the scrubber liquid fell below 4, caustic solution should have been pumped to the system. When MWH investigated the caustic pump, it observed that the pump was not energized. MWH energized the pump and fed caustic to the scrubber tank in order to neutralize the acidic water. MWH raised the pH of the liquid to 7 and tested the pH with litmus paper. Durr removed the pH probe and observed that the acidic solution damaged the probe. Durr ordered a replacement pH probe and reported that it will also inspect the conductivity probe. MWH reported that the overflow on the scrubber unit opens directly into the scrubber and it believes that the venturi action of the vapors and water in the scrubber force water out of the overflow. Ryan Construction was scheduled to be onsite during the following week to reconfigure the overflow piping on the scrubber unit in order to minimize the water that exits the overflow.

MWH reported that Austgen delivered the programmable logic controller (PLC) for the OFCA blower shed on March 15, 2002. MWH and Austgen will continue to install and test the PLC and its interlocks with the thermal oxidizer and scrubber system.

Bingham Environmental Technologies, Inc. demonstrated how to use the FID and PID for MWH employees on March 12, 2002. MWH will use this equipment to perform air monitoring of the OFCA ISVE system in accordance with the Performance Standard Verification Plan.

MWH reported that the GWTP was operating at 40 gpm and was pumping from both On-Site Containment Area (ONCA) and OFCA extraction wells, monitoring well MW56, and the Perimeter Groundwater Containment System. This week, MWH brought EW-12 back on-line. MWH reported that the biomass in the Activated Sludge Plant had increased, thereby increasing the treatment efficiency.

MWH redeveloped MW-17 by surging and purging three well and sandpack volumes of water. MWH recorded the pH, specific conductance, temperature, and turbidity at regular volume intervals for stabilization. MWH purged a total of approximately 30 gallons of water. MWH postponed the abandonment of monitoring well MW-18 and piezometers P61 and P62 until March 26, 2002, in order for the property owner to observe the abandonment of MW-18. MWH reported that it scheduled to replace piezometers P93 and P94 during the ONCA ISVE well installation activities scheduled for the fall of 2002. MWH scheduled the March 2002 groundwater sampling event for the week of March 18, 2002. MWH will conduct the sampling event in accordance with the *Draft Revised Long-Term Groundwater Monitoring Plan* (DRLTGMP).

MWH held the weekly construction coordination meeting at the site on March 14, 2002.

#### **Topics of Concern:**

- MWH was unable to obtain a groundwater elevation at monitoring well MW-18 due to debris in the well. MW-18 is part of the long term monitoring program.
- The residential well located at 1007 Reder Road could not be sampled because the pump was not operating. This well is part of the long term monitoring program.

#### **Concern Resolution:**

- MWH proposed to replace MW-18 with MW-17 in the *Draft Revised Long-Term Groundwater Monitoring Plan*. MWH scheduled to abandon MW-18 in accordance with the Indiana Administrative Code on March 26, 2002.

#### **Upcoming Activities:**

- Durr to replace scrubber pH probe.
- Austgen to complete installing the control logic for the OFCA ISVE system.
- Ryan Construction to reconfigure scrubber overflow piping.
- MWH to resume pulling vapors from the OFCA ISVE system.
- MWH to remove water from OFCA ISVE well SVE-7 yard piping.
- MWH to conduct the March 2002 groundwater sampling event during the week of March 18, 2002.



- MWH to abandon monitoring well MW-18 and piezometers P61 and P62 on March 26, 2002.

Signature: Leigh Peters

Date: March 18, 2002

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**WEEKLY CONSTRUCTION MEETING AGENDA  
FOR MARCH 14, 2002 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** March 14, 2002

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**TOPICS:**

Health and Safety Summary

GWTP Status

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

- Durr on site this week to continue oxidizer/scrubber system testing/setup.
- Oxidizer/scrubber operation training today.
- Austgen Electric and Ryan Construction performing various tasks on system.
- PLC in blower shed is ready for delivery tomorrow. Austgen will be on site tomorrow and Monday for install. Debug and commissioning will occur next week.

Groundwater Sampling

- Well abandonment/piezometer replacement installation scheduled for March 25.

Looking Ahead

Week of...	Task
March 18	<ul style="list-style-type: none"><li>• March sampling event</li><li>• ISVE Blower Shed PLC installation/debug/commissioning</li></ul>
March 25	<ul style="list-style-type: none"><li>• ISVE system optimization</li></ul>
April 1	<ul style="list-style-type: none"><li>• ISVE system startup</li></ul>
April 8	

Next Weekly Construction Meeting

- Thursday, March 21, 2002

SIGN IN SHEET  
WEEKLY CONSTRUCTION MEETING  
MARCH 21, 2002

Name	Company	Fax Number
ROBERT ADAMS	MWH	630-836-8959
LEIGH PETERS	AVSPL	312-346-4781
CHRIS DALY	MWH	
TODD LEWIS	MWH	
LEE OROSZ	MWH	
TOM TINKS	MWH	(via phone)
SEAN GRADY	IDEM	(via phone)
KEVIN ADLER	EPA	(via phone)
PETER VAAT	MWH	(via phone)
RICK MUELLER	MWH	
TRANS KUNIGUTM	MWH	(via phone)

**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR MARCH 14, 2002 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** March 14, 2002

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**ATTENDEES:** Rob Adams – MWH  
Leigh Peters – BVSPC  
Chris Daly – MWH  
Todd Lewis – MWH  
Lee Orosz – MWH  
Tom Tinics – MWH  
Rick Mueller – MWH  
Peter Vagt – MWH (via phone)  
Travis Klingforth – MWH (via phone)  
Chad Smith – MWH (via phone)  
Kevin Adler – U.S. EPA (via phone)  
Sean Grady – IDEM (via phone)

**TOPICS:**

Health and Safety Summary

Training for the operation of the flame ionization detector (FID) was conducted on March 12. The FID will be available for ISVE system monitoring and health and safety monitoring.

During the ISVE system installation process, the oxidizer/scrubber system was temporarily set up so that the normal overflow water generated drained into the existing in-floor sump. Upon the completion of the installation process, the overflow water will be redirected to another part of the system. During scrubber system testing on March 13 and 14, the caustic injection system malfunctioned, resulting in a low pH in the overflow water. Because the system was temporarily set up to drain in the in-floor sump, low pH water drained across the floor and into the sump as designed. Upon discovering this MWH partitioned off the area and remedied the situation.

A Kickoff Meeting for the installation of the PLC in the blower shed by Austgen Electric will be conducted on March 14. Austgen will be made aware of health and safety issues associated with equipment operation.

Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating at 40 gallons per minute (gpm). Approximately 15-20 gpm are being pumped from on-site wells and 25 gpm are being pumped from the off-site wells. A minimal amount is being pumped from the PGCS and MW-56. Volatile Suspended Solid (VSS) concentrations have risen above 1,000 ppm, indicating the activated sludge plant is returning to normal operation.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

Durr Engineering is on site to continue the oxidizer/scrubber system testing and startup. As part of this testing, vapor was extracted from a group of ISVE wells and the ISVE blower was operated to simulate normal operating conditions. Initial high concentrations of volatile organic carbons (VOCs) in the vapor stream resulted in overheating of the thermal oxidizer. Flow from the well field was minimized and all ambient air valves were opened full. At these settings, the thermal oxidizer is able to sustain combustion temperatures without the addition of natural gas.

The system was run in this state overnight on March 13 and March 14. At some point during the test, power was lost at the GWTP and blower shed, causing both the oxidizer and the ISVE blower to shut down. Also, the caustic addition process malfunctioned causing a low pH incursion in the scrubber. Some of this low pH water was ejected from the system through an overflow pipe, as mentioned in the Health and Safety section of these minutes. The water ran along the concrete into a sump as per design; however, the concrete was scarred by the low pH. Also, the pH probe was damaged and needs to be replaced. Austgen Electric was on site on March 14 to ensure the controls associated with the caustic addition are correct.

Austgen Electric anticipates delivery of the PLC in the blower shed on March 15. They are scheduled to begin installation on March 18. ISVE system start-up is scheduled for April 1.

Groundwater Sampling

The redevelopment of monitoring well MW-17 occurred on March 12. The abandonment of MW-18 and piezometers P-61 and P-62 has been rescheduled to March 25 to accommodate the resident's schedule. MWH will take photos of the property prior to and following the abandonment of MW-18 to document the process. The March 2002 sampling event is scheduled for March 18 through March 21. The wells included will be gauged on March 18 and sampled during the remainder of the week.

Off-Site Area Cover

Heritage has been contacted to finish the reconstruction of the clay cover in the Off-Site Area. The additional work will involve compaction testing by Patrick Environmental and any additional compaction necessary. Patrick Environmental is scheduled to begin work on March 19.

Security Fence has been contacted to install additional silt fence in the Off-Site Area in areas needing routine maintenance.

Next Weekly Construction Meeting

- Thursday, March 21, 2002

CAD/TMK/TAL

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**Weekly Oversight Summary Report No. 55**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of March 18, 2002

**BVSPC O/S Dates:** March 19 and 21, 2002 (Ms. Peters)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	7	Respondent's General Contractor
U.S. Environmental Protection Agency	1	
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Austgen	3	Electrical Contractor
Ryan Construction	1	General Contractor

**Construction Activities**

**Major Activities:**

- Austgen continued to install the control logic for the Off-Site Containment Area in-situ soil vapor extraction system.
- Ryan Construction and Montgomery Watson Harza inspected the scrubber and replaced faulty gaskets.
- Montgomery Watson Harza performed the semi-annual groundwater sampling event.
- Montgomery Watson Harza held the weekly construction coordination meeting.

**Activities Performed:**

Austgen delivered and installed the programmable logic controller for the Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) system. Montgomery Watson Harza (MWH) reported that it instructed Austgen to install a bypass control in the OFCA blower shed control room so that the portion of the shed that contains the ISVE header system could be ventilated prior to entering. Austgen completed installing the control system and began installing the computer interface for the controls.

Ryan Construction disassembled the scrubber to determine if damage to the system had occurred last week when the pH of the scrubber liquid dropped to 1. An independent contractor inspected the pump and determined that it required some repair. Ryan Construction replaced the remaining leaking gaskets and reassembled the scrubber. Ryan reconfigured the scrubber overflow system in order to minimize liquid escaping the scrubber tank via the overflow system. Ryan Construction installed a flow meter in the natural

gas line on the thermal oxidizer for MWH to monitor the natural gas usage in accordance with MWH's Performance Standard Verification Plan.

MWH reported that Durr Environmental, Inc. (Durr) was scheduled to return to the site on March 26, 2002, to replace damaged parts on the scrubber and provide training to MWH employees on the thermal oxidizer and scrubber system.

MWH conducted the semi-annual groundwater sampling event in accordance with the *Draft Revised Long-Term Groundwater Monitoring Plan* (DRLTGMP). The sampling event consisted of measuring water levels on Monday, March 18, 2002. MWH overlooked measuring the water level at P105 on Monday and measured the water level at P105 on Tuesday, March 19, 2002. MWH collected samples at 32 monitoring wells for volatile organic compounds, 3 wells for the semivolatile organic compound bis(2-chloroethyl)ether, and 3 wells for arsenic. MWH scheduled the abandonment of monitoring well MW-18 and piezometers P61 and P62 for March 26, 2002.

Heritage Industrial Services (HIS) and Patrick Engineering (Patrick) arrived at the site on March 21, 2002, in order to perform compaction testing of the OFCA cover in locations where the ISVE yard piping was installed in December 2001. MWH reported that HIS and Patrick were not scheduled to be at the site, and as such, the MWH engineering staff were not present to record the locations of the compaction testing. MWH rescheduled the compaction testing with HIS and Patrick for March 26, 2002.

MWH reported that the groundwater treatment plant (GWTP) was operating at 45 gpm and was pumping from both On-Site Containment Area and OFCA extraction wells, monitoring well MW56, and the Perimeter Groundwater Containment System. MWH began pumping from EW-18 and EW-20 this week.

MWH held the weekly construction coordination meeting at the site on March 21, 2002.

**Topics of Concern:**

- MWH was unable to obtain a groundwater elevation at monitoring well MW-18 due to debris in the well. MW-18 is part of the long term monitoring program.
- The residential well located at 1007 Reder Road could not be sampled because the pump was not operating. This well is part of the long term monitoring program.

**Concern Resolution:**

- MWH proposed to replace MW-18 with MW-17 in the *Draft Revised Long-Term Groundwater Monitoring Plan*. MWH scheduled to abandon MW-18 in accordance with the Indiana Administrative Code on March 26, 2002.

**Upcoming Activities:**

- Durr to replace the scrubber pH and conductivity probes and provide training to MWH on the thermal oxidizer and scrubber system.
- Austgen to complete installing the computer interface for the OFCA ISVE system.
- MWH to resume pulling vapors from the OFCA ISVE system.



- MWH to remove water from OFCA ISVE well SVE-7 yard piping.
- Patrick and HIS to perform compaction testing of OFCA cover on March 26, 2002.
- MWH to abandon monitoring well MW-18 and piezometers P61 and P62 on March 26, 2002.

Signature: Leigh Peters

Date: March 27, 2002

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**WEEKLY CONSTRUCTION MEETING AGENDA  
FOR MARCH 21, 2002 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** Thursday, March 21, 2002

**MEETING TIME:** 14:00

**MEETING LOCATION:** ACS Site – Site Trailer

**TOPICS:**

Health and Safety Summary

GWTP Status

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

- Durr off site this week, to next week to continue oxidizer/scrubber system testing/setup.
- Oxidizer/scrubber operation training next week.
- Austgen Electric and Ryan Construction performing various tasks on system.
- PLC in blower shed is installed Monday 3-18. Austgen on site today and through Monday for install of programming, debug and commissioning.

Groundwater Sampling

- Ground water sampling underway, water level took place Mon. Sampling began Tue and will be completed Fri. of this week.
- Well abandonment / piezometer replacement installation scheduled for March 25.

Looking Ahead

Week of...	Task
March 18	<ul style="list-style-type: none"><li>• March sampling event... in process</li><li>• ISVE Blower Shed PLC installation/debug/commissioning in process</li></ul>
March 25	<ul style="list-style-type: none"><li>• ISVE system optimization... Durr scheduled for back on site Tue. 3-26-02</li><li>• Security Fence on site Monday (weather dependent) to install silt fencing and erosion controls in the OFCA along Colfax St.</li><li>• Heritage Industrial and Patrick Engineering on site Tue (weather dependent) to resume testing of compaction in the OFCA, and complete contract requirements from ISVE cap installation.</li></ul>
April 1	<ul style="list-style-type: none"><li>• ISVE system startup... including influent and effluent sampling.</li></ul>

April 8	
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Next Weekly Construction Meeting

- Thursday, March 28, 2002

**SIGN IN SHEET**  
**WEEKLY CONSTRUCTION MEETING**  
**MARCH 21, 2002**

Name

Company

Fax Number

KEVIN ADLER EPA (312) 353-5541

Lough Peters BVSPC (312) 346 4781

JOY TIMES MWH

Rich Flores Austgen 219-922-8409 (FAX)  
219-924-7528 (TEL)

TODD LEWIS MWH MWH

LEE OROSZ MWH

**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR MARCH 21, 2002 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** March 21, 2002

**MEETING TIME:** 2:00 PM

**MEETING LOCATION:** ACS Site – Site Trailer

**ATTENDEES:**

- Rob Adams – MWH (via phone)
- Leigh Peters – BVSPC
- Chris Daly – MWH (via phone)
- Todd Lewis – MWH
- Lee Orosz – MWH
- Tom Tinics – MWH
- Rick Mueller – MWH (via phone)
- Peter Vagt – MWH (via phone)
- Travis Klingforth – MWH (via phone)
- Kevin Adler – U.S. EPA
- Sean Grady – IDEM (via phone)
- Rich Flores – Augsten Electric

**TOPICS:**

Health and Safety Summary

No health and safety related issues arose this week. As part of the long-term groundwater monitoring, well MW-18 and piezometers P-61 and P-62 will be abandoned next week. Mid-America Drillers, the subcontractor that will perform the work, have provided their required health and safety paperwork to MWH.

Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating at 45 gallons per minute (gpm). Approximately 20 gpm are being pumped from On-Site Area wells and 25 gpm are being pumped from Off-Site Area wells. Extraction wells EW-18 and EW-20 are once again bringing groundwater into the GWTP. EW-20A and EW-20B will soon be bringing groundwater into the GWTP. Groundwater is also being pumped to the GWTP from the Perimeter Groundwater Collection System (PGCS) and MW-56.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

Durr Engineering is currently off-site, but is scheduled to return the week of March 25 to continue the oxidizer/scrubber system testing and startup.

Austgen Electric delivered the programmable logic center (PLC) to the blower shed on March 15. Austgen began installation of the PLC on March 18 and also began replacing parts on the pH control system and scrubber pumps as needed. Ryan Construction is on site performing various installation tasks. The piping work required for the ISVE system is now substantially complete. ISVE system start-up is scheduled for April 1. Initial thermal oxidizer sampling is scheduled to begin during the first week of ISVE system start-up.

#### Groundwater Sampling

The abandonment of monitoring well MW-18 and piezometers P-61 and P-62 has been rescheduled to March 25 to accommodate the resident's schedule. The subcontractor Mid-America Drilling Company will perform the work.

The March 2002 sampling event began on March 18 and will be completed on March 21. Water levels were collected on March 18 and groundwater sampling began on March 19.

#### Off-Site Area Cover

Heritage Environmental Services has been contacted to finish the reconstruction of the clay cover in the Off-Site Area after the installation of the ISVE conveyance piping. The additional work will involve compaction testing by Patrick Environmental and any additional compaction necessary. Patrick Environmental is scheduled to begin work on March 26.

Routine inspection of the Off-Site Area in accordance with the Stormwater Pollution Prevention Plan (SWPPP) has identified portions of the silt fencing that need maintenance and/or repair. Security Fence Company has been contacted to install additional silt fence in these areas. They are scheduled to be on site during the week of March 25.

#### Next Weekly Construction Meeting

Thursday, March 28, 2002

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**Weekly Oversight Summary Report No. 56**  
**ACS Superfund Site WA57, 46526.238**

**Reporting Period:** Week of March 25, 2002

**BVSPC O/S Dates:** March 26 and 28, 2002 (Ms. Peters)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	5	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Austgen	2	Electrical Contractor
Ryan Construction	2	General Contractor
Durr Environmental, Inc.	1	Thermal Oxidizer and Scrubber Contractor
Mid-America Drilling	2	Drilling Contractor
Heritage Industrial Services	1	OFCA ISVE Yard Piping Contractor

### **Construction Activities**

#### **Major Activities:**

- Austgen installed the computer interface for the Off-Site Containment Area in-situ soil vapor extraction system.
- Ryan Construction installed a recycle line from the groundwater treatment plant effluent to the scrubber system.
- Montgomery Watson Harza abandoned monitoring well MW-18 and piezometers P61 and P62.
- Heritage Industrial Services began preparations to remove water from Off-Site Containment Area in-situ soil vapor extraction system well SVE-7 yard piping.
- Montgomery Watson Harza held the weekly construction coordination meeting.

#### **Activities Performed:**

Austgen completed the computer interface for the Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) system. On Tuesday, March 26, 2002, Ryan Construction installed a recycle line from the groundwater treatment plant (GWTP) discharge effluent tank to the scrubber system. When Ryan Construction began removing a flange on the scrubber unit, it realized that the water level in the scrubber reservoir was higher than the flange connection and that the water needed to be purged prior to continuing with the removal of the flange. Montgomery Watson Harza (MWH) opened the purge valve and the liquid in the reservoir began flowing to the floor sump. Ryan tested the pH of the liquid from the reservoir with

litmus paper and determined that the pH of the liquid was 12. MWH donned gloves and began flushing the area with clean water. Ryan Construction later donned gloves in order to complete connecting the recycle line.

Durr Environmental, Inc. (Durr) installed replacement conductivity and pH probes in the scrubber system on the evening of March 26. MWH and Durr began operating the thermal oxidizer and scrubber system that evening with ambient air. During the operation of the scrubber, MWH and Durr observed that the pH of the scrubber liquid continued to rise. The pH then fell to a level of 5 and the pH probe produced an error message. MWH and Durr ceased operating the thermal oxidizer and scrubber system. MWH later determined that the check valve on the caustic pump was unable to close because of debris in the valve. MWH hypothesized that a siphoning action in the piping to the caustic solution caused the continued addition of caustic to the scrubber reservoir when the pump was off. Durr determined that the pH probe was damaged; however, the conductivity probe had not been damaged from the alkalinity of the liquid. MWH flushed out the scrubber system with clean water on March 27.

MWH reported that Durr was scheduled to return to the site on April 1, 2002, to replace damaged parts on the scrubber and provide training to MWH employees on the thermal oxidizer and scrubber system. Rosemount, the manufacturer of the pH probe, was scheduled to be on-site on April 1, 2002, to assess the problems with the pH probes.

Austgen began testing the OFCA ISVE system controls. Several errors were encountered and Austgen corrected the connections.

Mid-America Drilling abandoned piezometers P61 and P62 and monitoring well MW-18 on March 26, 2002. Piezometer P61 was filled with bentonite grout from the base of the piezometer to ground surface with a tremie pipe. The piezometer stick-up was then removed. The stick-up for piezometer P62 had been destroyed and was no longer present above ground. MWH probed into the piping and determined that the piezometer was filled with soils to approximately 4 feet below ground surface. MWH instructed Mid-America Drilling to fill the remaining length of the piezometer with bentonite grout to the ground surface. Prior to beginning abandonment activities at MW-18, Mid-America Drilling probed the well with a tremie pipe to the depth of the well. MWH then measured the depth of the well with a tape and found that there was no longer an obstruction in the well; however, MWH decided to continue with the abandonment of MW-18. Mid-America Drilling filled the well with bentonite pellets and used the tremie pipe to ensure that bridging did not occur. Mid-America Drilling then removed the concrete and cover for the well, hydrated the bentonite pellets, and backfilled the depression with sand. Soils from the area surrounding MW-18 were then placed over the sand to complete the cover.

A representative from HIS was on-site on March 28 to determine the equipment required to remove the water from SVE-7 yard piping and pressure test the line. HIS was scheduled to return to the site on April 1, 2002, to begin work. MWH postponed the compaction testing by Heritage Industrial Services (HIS) and Patrick Engineering (Patrick) until April 2, 2002.



MWH reported that the GWTP was operating at 45 gpm and was pumping from both On-Site Containment Area and OFCA extraction wells, monitoring well MW56, and the Perimeter Groundwater Containment System. MWH began pumping from EW-18 and EW-20 this week.

MWH held the weekly construction coordination meeting at the site on March 28, 2002.

**Topics of Concern:**

- MWH was unable to obtain a groundwater elevation at monitoring well MW-18 due to debris in the well. MW-18 is part of the long term monitoring program.
- The residential well located at 1007 Reder Road could not be sampled because the pump was not operating. This well is part of the long term monitoring program.

**Concern Resolution:**

- MWH proposed to replace MW-18 with MW-17 in the *Draft Revised Long-Term Groundwater Monitoring Plan*. MWH abandoned MW-18 in accordance with the Indiana Administrative Code on March 26, 2002.

**Upcoming Activities:**

- Durr to replace the scrubber pH probe and provide training to MWH on the thermal oxidizer and scrubber system.
- Rosemount to assess the cause of failure on the pH probes.
- MWH to resume pulling vapors from the OFCA ISVE system and begin system operation.
- HIS to remove water from OFCA ISVE well SVE-7 yard piping.
- Patrick and HIS to perform compaction testing of OFCA cover on April 2, 2002.

Signature: Leigh Peters

Date: April 2, 2002

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**WEEKLY CONSTRUCTION MEETING AGENDA  
FOR MARCH 28, 2002 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** Thursday, March 28, 2002

**MEETING TIME:** 10:00

**MEETING LOCATION:** ACS Site – Site Trailer

**TOPICS:**

Health and Safety Summary

GWTP Status

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

- Durr on site this week (Tues/Wed) to continue with thermal oxidizer/scrubber system.
- Austgen continues with blower shed PLC and communication with thermox/scrubber
- Oxidizer/scrubber operation training next week.
- Heritage Environmental scheduled for Monday to clear SVE-07 conveyance line and pressure test line.

Groundwater Sampling

- Groundwater sampling was completed on Thursday, March 21.
- Well/piezometer abandonment completed on March 25.

Off-Site Temporary Cover Repair

- Heritage Environmental has scheduled compaction testing for Tuesday, April 2.

Looking Ahead

Week of...	Task
April 1	<ul style="list-style-type: none"><li>• ISVE system startup...including influent and effluent sampling.</li><li>• Heritage Industrial on site Mon to clear SVE-07 and pressure test.</li><li>• Heritage Industrial and Patrick Engineering on site Tue (weather dependent) to resume testing of compaction in the OFCA, and complete contract requirements from ISVE cap installation.</li><li>• Security Fence on site Monday (weather dependent) to install silt fencing and erosion controls in the OFCA along Colfax St.</li></ul>
April 8	

Next Weekly Construction Meeting

- Thursday, March 28, 2002

Name	Company	Fax Number
Chris Daly	MWH	(630) 836-8959
Rich Flores	Austgen	219-922-8409
Tom J. Tinics	MWH	219-924-4561
Lough PCHS	PRSPC	312 316 4781
LFE OROSZ	MWH	
Rob Adams	MWH	(via phone)
Todd Lewis	MWH	(via phone)
Kevin Adler	USEPA	(via phone)
Sean Grady	IDEM	(via phone)

**WEEKLY CONSTRUCTION MEETING MINUTES  
FOR MARCH 28, 2002 MEETING  
AMERICAN CHEMICAL SERVICE, NPL SITE  
GRIFFITH, INDIANA**

**MEETING DATE:** Thursday, March 28, 2002

**MEETING TIME:** 10:00 AM

**MEETING LOCATION:** ACS Site – Site Trailer

**ATTENDEES:** Tom Tinics, MWH  
Chris Daly, MWH  
Lee Orosz, MWH  
Leigh Peters, BVSPC  
Rich Flores, Austgen  
Rob Adams, MWH (via phone)  
Todd Lewis, MWH (via phone)  
Kevin Adler, USEPA (via phone)  
Sean Grady, IDEM (via phone)

**TOPICS:**

Health and Safety Summary

A minor health and safety incident occurred on March 26. A pipefitter for Ryan Construction was installing a tee into piping on the Durr scrubber unit. The water from the scrubber spilled onto the pipe fitter's hands and feet, causing a skin rash on his feet. His work boots have been disposed of and will be replaced. The pH monitoring system of the scrubber indicated that the water had a neutral pH, however, when measured using litmus paper the pH was approximately 10. The pH system should have recognized the problem, alerted the operator, and shut down the system. The incident was the result of two problems: the pH probe was not functioning properly and the check valve on the caustic feed line was faulty. Upon closer inspection of the caustic feed line into the scrubber, a small piece of debris was discovered in a check valve, causing the valve to stay in the open position and siphon caustic into the scrubber. This caused the high pH, but the faulty pH probe failed to alert the operator of the problem and shut down the system as designed. MWH is preparing a Health & Safety Incident report to document the incident.

GWTP Status

The treatment plant is currently running at 45 gallons per minute (gpm). The plant was down 3 to 4 times in the past week due to control issues associated with the installation of controls for the SVE system. The plant was down for 5 to 15 minutes each time.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

Durr was on site on March 26 and March 27 to continue work on the thermal oxidizer/scrubber system. Durr installed a new pH probe on March 26. The SVE system

was run for approximately 60 minutes in the afternoon on March 26. The system continued to have problems with the pH probe, as discussed in the above health and safety summary. The manufacturer, Rosemount Instruments, will be on site on April 1 to troubleshoot. In the interim, pH will be regularly monitored manually using pH litmus paper. Austgen continued working on the blower shed programmable logic control (PLC) and communication between the PLC and the Durr oxidizier/scrubber unit.

Heritage Industrial is scheduled to begin clearing the conveyance piping to SVE-07 of excess water on April 1. Heritage will also pressure test the line at this time.

#### Groundwater Sampling

Groundwater sampling was completed on March 21. Monitoring well (MW-18) and piezometer (P-61 and P-62) abandonment was completed on March 25.

#### Off-Site Temporary Cover Repair

Heritage Industrial is scheduled to perform compaction testing in the Off-Site Area on April 2. They will be testing the areas where the ISVE conveyance lines were installed.

#### Looking Ahead

Week of...	Task
April 1	<ul style="list-style-type: none"><li>• ISVE system startup, including influent and effluent sampling.</li><li>• Heritage Industrial on site April 1 to clear SVE-07 and pressure test the lines.</li><li>• Heritage Industrial and Patrick Engineering on site April 2 (weather dependent) to resume testing of clay compaction in the Off-Site Area and complete contract requirements from ISVE cap installation.</li><li>• Security Fence on site April 2 (weather dependent) to install silt fencing and erosion controls in the Off-Site Area along Colfax Ave.</li></ul>
April 8	

#### Next Weekly Construction Meeting

- Thursday, April 4, 2002

CAD/TMK/RAA/PJV

J:\209\0601 ACS\0202 MWA PM\Meeting Minutes 03-28-02.doc

(24)

3/7/02 Jeff E. Peters

0840 Arrive onsite, 40°F, clear, light wind from north  
Personnel Present:

Terry Frick Ryan Construction

\* Lee Orosz MNH

Verry Clark Ryan Construction

\* Chris Daly MNH

\* Tom Tinics MNH

\* Leigh Peters BVSPC

0855 Spoke with C. Daly and Tom Tinics regarding site activities. They reported that Durr continues to troubleshoot scrubber and thermal oxidizer. Testing connections with PLC. MNH does not know anticipated start date of operation.

0920 Spoke with Lee Orosz regarding sampling equipment. I informed Lee that BVSPC did not perform any soil sampling per reports from C. Galley and S. Muvicka. Lee reported that he will continue to store coolers in designated location and will address disposal options for samples and containers.

0930 Roll 20 Photos 1-3 facing south at scrubber installed in GWTP

0935 Roll 20 Photo 4 facing southeast showing the Durr representative testing the PLC

Jeff E. Peters

(25)

3/7/02 Jeff E. Peters

1000 Weekly construction coordination meeting  
Attendees \* on previous list plus (via phone)

Travis Klingfort MNH

Pete Vogt MNH

Chad Smith MNH

Kevin Adler USEPA

Sean Bradley IDEM

H&S: no incidents. MNH ordered safety glasses for smaller tanks for compliance with H&S

GWTP: pumping 38 gpm from PGCS, EN-10, EN-11, EN-15, EN-16, EN-17, EN-19, EN-19A. MNH not pumping from EN-12 in which acetone was high. EN-12 and EN-11 have historically pumped significantly because lowest point of barrier wall. No anticipated future upgrades to GWTP, only expect to insulate tank possibly this summer. MNH documentation O&M manual.

ISUE: Durr on-site and testing. Ryan replaced more gaskets, Austgen added input card to PLC. Thermox up to temp. May begin pulling vapors from OFCA tomorrow. Austgen to complete OFCA blower shed PLC by 3/18/02. Official start-up scheduled 4/1/02. MNH providing training on FID on 3/12/02. T. Tinics to monitor background today.

Jeff E. Peters

(26)

3/7/02

J. E. PETER

GW Sampling: Reduclop MW17 on 3/12/02.  
 MWH to abandon MW18 & piezometers either  
 3/12/02 or week of 3/25/02. Replacing  
 piezometers P93/P94 during DNCA  
 ISVE well installation. 3/18/02 - groundwater  
 sampling. MWH provided response to  
 DRLTGM comments. GW sampling to be  
 performed in accordance with DRLTGM.

GWTP Samples: MWH to dispose of soil  
 samples and is storing BVSPC coolers.

### Look Ahead:

3/11/02: Well/piezometer abandonment. ISVE test

3/18/02: March GW sampling. ISVE PLC install.

4/1/02: ISVE system start-up.

Next Meeting: 3/14/02 at 10:00

1045 Weekly construction mtg adjourn

1055 Spoke with L. Campbell regarding site activities.

1150 Spoke with Chris Daly regarding questions  
 on ISVE start-up plan. All questions  
 satisfactorily addressed. Report to start pulling  
 vapors tomorrow. Will call if not.

1300 Left site for day

J. E. PETER  
 3/7/02

(27)

3/8/02

J. E. PETER

0750 Arrive On-site, 50°F, Rainy, Wind from South

### Personnel Present:

Lee Orszag MWH

Jerry Clark Ryan Construction

Chris Daly MWH

Larry Peters BVSPC

0815 Spoke with C. Daly regarding site activities.

Summarized MWH response to BVSPC  
 questions regarding ISVE operation.

0900 Went to GWTP to check on status of  
 thermox activities. Durr to perform pH  
 calibration and troubleshoot problem  
 with transducer on water level sampler  
 tank.

0945 Discussed scrubber process with thermal oxidizer  
 with C. Daly.

1045 C. Daly reported that Durr representative  
 did not anticipate starting system until Monday.

1100 Roll 20 Photo 5 facing west showing piping  
 for scrubber

1105 Roll 20 Photo 6 facing west showing  
 pH & conductivity sensors and cavitic  
 addition location.

1110 Left site for day

J. E. PETER

(28)

3/12/02

J. S. Peters

0730 Arrive on-site. 34°F. Clear, wind from southeast light and variable. Spoke to C. Daly of MNH. He reported that Dave Rep on site yesterday. To start pulling vapors from DECA this morning. Training for FID scheduled today. C. Smith to redevelop MN17.

0800 went to DECA blower shed with C. Daly to observe him set up for start-up.

0810 Roll 20 Photo 7 facing east showing blower and inside of blower shed

0820 Personnel Present on-site

Lee Orosz MNH

Chris Daly MNH

Leigh Peters BVSPC

John Barlow Durr

Tom Truitt MNH

Chad Smith MNH

Rudy Stein MNH

0830 C. Smith and R. Stein arrive on site to redevelop MN17

0850 At DECA blower shed. MNH setting up to start sending vapors to Thermo/scrubber

0925 MNH sent ambient air to BWTP Thermo unit. and took initial readings at blower

J. S. Peters

(29)

3/12/02

J. S. Peters

shed and plant.

0940 Roll 20 Photo 8 facing southeast of MNH sampling vogs at scrubber effluent with FID. MNH operate Thermo with ambient to pull vapors after FID training.

0945 observed MNH begin redeveloping MN17

0950 Roll 20 Photo 9 facing southeast of MNH purging MN17 and taking pH, conductivity, temp and turbidity.

C. Smith of MNH reported removing 3 well and sand/pack volumes for a total of approx. 30 gallons. 9.2 gallons = the well and sand pack volume.

1010 MNH ceased purging MN17, measured water level at 15 ps ft below inner well casing

1025 Attended FID training at MNH trailer. held by Dan Bingham from elvin/BETI

1120 Training concluded

1140 Left site for lunch. Spoke with L. Campbell on activities

1230 Return to site. Worked on weekly report

1300 MNH prepared to pull vapors from DECA blower shed

1325 MNH opened gate valves to Group 1 wells and closed ambient air valve. FID reading at piping influent to blower and effluent at blower around 20 ppm. PID readings at 0.5-1.1 ppm



(30)

3/12/02

Jeff E. Peters

1335 Durr reported Thermax was operating at 1200°F and when vapors were received by the Thermax, temp spiked 1800°F, pressure release valve in blowdown operated since Thermax emergency shut down due to temperatures. MNH will reduce # of wells open to send to Thermax, ventilate shed.

1350 MNH/Durr restart system w/ ambient air.

MNH slowly closed ambient air while in communication w/Durr at Thermax.

1410 Roll 20 Photo 10 Showing C Dalg closing ambient air valve and opening gate valves at SVE-24 and SVE-27, facing northeast.

Durr reported Thermax at temp and running off vapors only, no natural gas, to sustain Thermax temp.

1440 MNH continued to test ISVE system and determine flow from wells to Thermax while monitoring temp of unit.

1505 MNH led gate valves to group 1 wells open appx 1/2 way, ambient air valve open completely. Thermax at appx 1650°F. MNH began taking measurements.

1515 Roll 20 Photo 11 facing northwest of measuring differential pressure at SVE-14.

MNH measuring VOCs at wells. Readings

Jeff E. Peters

(31)

3/12/02

Jeff E. Peters

at SVE-27 around 6.7 ppm on FID. VOCs at SVE-24 exceeded 50,000 ppm on FID. Noticeable odor observed from SVE-24 by MNH. Remaining wells in group 1 had VOCs greater than 50,000 ppm on FID. MNH indicated may have VOCs adsorbed onto inside of tubing of pump used to take VOC sample.

1555 Returned to GUTP, MNH to begin taking measurements at Thermax/scrubber. Pump for caustic not connected to PLC. Durr and MNH to work on amount of vapors pulled into Thermax and programs for system. MNH to test tomorrow.

1600 Left site for day.

Jeff E. Peters  
3/12/02

(32)

3/14/02

J. E. Peters

0800 Arrive on-site, partly cloudy, ~42°F

Wind from South-Southwest

Personnel on-site:

\* Lee Orasz MWA

Rich Flores Austgen

Gary Alexander Austgen

\* Todd Lewis MWA

Jerry Clark Ryan

\* Chris Daly MWA

\* Tom Tinius MWH

\* Leigh Peters BVSPC

\* John Barlow DWR

0815 Spoke with T. Tinius, operated thermocycler blower overnight. System shut down after midnight. MWH ~~data~~<sup>RP</sup> thought that power was lost up OFCA and at GWTP. C. Daly reported that caustic pump and controls were connected on Wednesday. Scrubber water pH low set point set to 4. Because of venturi action in scrubber tank, water is being forced through overflow into ground for treatment through plant. Ryan constructed trap to eliminate overflow to ground. Will need to be reconstructed. Water still being forced out. pH low for metals ppm.

J. E. Peters

(33)

3/14/02

J. E. Peters

0850 Roll 20 Photo 12 facing west of trap for scrubber overflow

0850 Roll 20 Photo 13 facing south of acidic (pH ~4) overflow. MWH placed cones around the water on concrete and rinsed down with water. MWH measured pH at 8

0905 Roll 20 Photo 14 facing southwest of cones and MWH rinsing with water.

0910 MWH and DWR testing the pH probe on scrubber. Probe was broken - pH was not measured by probe - continued to drop. System shut down

0940 MWH turned on caustic pump. Power not on for pump. Pumped caustic to scrubber.

1000 Weekly Construction Meeting  
Attendees (\* on previous list) plus:

Rob Adams MWH

Rick Mueller MWH

S. Grady IDEM (via phone)

K. Adler USEPA (via phone)

P. Vagt MWA (via phone)

T. Klingforth MWH (via phone)

C. Smith MWH (via phone)

H&S: No H&S incidents. FID/PID training held on 3/12/02. MWH to have kick off mtg

J. E. Peters

(34)

3/14/02

Jag &amp; Peter

with Austgen to address new concerns at the site: moving explosive vapors, potential for vapors at blower shed, acidic scrubber solution. MNH had incident with scrubber overflow pH lowering to 1. MNH flushed area with water, placed cones and added caustic.

GWTP: Pumping 40 gpm, pump changeouts at EW-11, EW-19. began pumping from EW-12 biomass growth good and carbon still holding. Pumping 15-20 gpm from ONCA, 25 gpm OFCA and some from MW56 and PGCS.

ISVE: MNH begin pulling vapors Tuesday. pulling mostly ambient air and can sustain burn in thermox unit. Dave to check conductivity probe and replace pH probe. MW ran thermox Wednesday night - power failure shut system down. Thermox training postponed until repairs complete. Austgen establishing temporary interlock between thermox and blower. Blower shed controls to be delivered tomorrow and installation planned for next week.

GW: MW17 redeveloped 3/12. MW18, P61 and PG2 abandonment scheduled for 3/26

Jag &amp; Peter

(35)

3/14/02

Jag &amp; Peter

GW sampling event - 32 wells - 3/18  
USEPA suggested photos of area at MW18 prior to abandonment.

Work Added: Patrick/HIS for OFCA cover compaction. Security fence to install with fence near Colfax swale.

Next Mtg: 3/21/02 @ 10:00

10:30 mtg concluded. MNH discussed outstanding items on thermox/scrubber

11:15 MNH discussed thermox system controls with Dave. MNH reported Austgen to work on controls Fri & Monday. Replacement pH probe anticipated on Tuesday 3/19. MNH does not anticipate operating system without pH probe - will let Dave decide. System will also be down for Austgen.

12:00 Left Site for Day

Jag & Peter  
3/14/02

(36)

3/19/02

Jeff Peters

0710 Arrive Onsite. 40°F, Cloudy. light wind from East.

Personnel Present:

Lee Cross MWH

Jerry Clark Ryan

Chad Smith MWH

Rebecca Conant MWH

Lesley Hirschholzer MWH

Rudy Stern MWH

Leigh Peters BVSPE

Spoke with C. Smith, took water levels yesterday. missed one well P105 and took level this morning. 2 sampling teams for GW

0725 Roll 20 Photo 15 facing northwest of R. Steiner & Hirschholzer calibrating turbidity meter and flow through cells.

0755 C. Smith held H&S meeting for GW sampling teams. Working with clean wells to impacted wells.

0810 Began observing MWH sample at MW11.  
Analysis for VOCs only at MW11

0825 Roll 20 Photo 16 facing <sup>West</sup> ~~East~~ of MW11  
sampling at MW11. collecting field parameters.

0840 circuit box not working at MW11. Second box being delivered today. working off and on.

Jeff Peters

(37)

3/19/02

Jeff Peters

0920 MWH able to get pump to work after it was shutting down, possibly because of sediments.

0933 MWH collected samples at MW11

0935 Roll 20 Photo 17 facing Southwest of MW11  
collecting samples for VOCs at MW11

1000 MWH mobilized to MW12. observed sampling activities at MW12. MWH routinely sampled for drawdown with water level meter. tape. MWH recorded ORP, Temp, D.O, pH, turbidity, cond. with flow through cell every 3 minutes until parameters stabilized. Collected sample at MW12

1110 Sampling team broke for lunch. When return, to sample MW12.

1115 Left site for lunch.

1145 Return to site Spoke with Tom Tines regarding status of thermox and scrubber. pH and conductivity probes need to be replaced. motor damaged from running at too high of temperature. MWH does not know when Burr to return. Burr still needs to provide framing. Austgen installed PLC. WSA continue to install program and interlocks. MWH to receive flow meter this week - with smaller units for ~~PSV~~ JP PSVP monitoring.

1220 observed MWH sample at MW12.

1250 MWH set up to sample at MW31

Jeff Peters

(38)

3/19/02

Lyle Peters

1355: Observed C. Smith + L. Hirschhorn sample at MW 13. Using flow through cell and separate turbidity meter. C. Smith using turbidity meter readings for stabilization. Flow rate of 40 ml in 8 sec. Used vial for flow measurement. Also checking draw down. Other team read turbidity from flow through cell, not turbidimeter for wells MW1, MW12, MW08 and MW31.

1500 MWH collected VOC sample at MW13

1515 Left site for day

Lyle Peters  
3/19/02

(39)

3/21/02

Lyle Peters

0715 Arrive On site, Snowing. 28° F wind from east

Personnel Present

\* Lee Orosz MWH

Lesley Hirschhorn MWH

Chad Smith MWH

Rebecca Conant MWH

Jerry Blunk Ryan

\* Leigh Peters DVSPC

0720 Observed MWH prepare for sampling. Per MWH chart, 9 wells remain to be sampled.

C. Smith reported one turbidity meter not working yesterday - second not working today. MWH to use turbidity probe in flow thru.

0750 observed MWH mobilize to MW16. and perform groundwater sampling. Collected for VOCs and metals. MWH collected flow rates, water levels and parameters from flow-thru cell. MWH did not use independent turbidity instrument because it was not working.

0850 MWH collected samples to sample at MW12 north and MW20 & MW29

0910 Spoke with T. Thies. Analygen completing pump wiring controls for ORCA blowershed 15K cfm. Analygen also installing controls to vent return blowershed w/o needing to open doors.

Lyle Peters

(40)

3/21/02 *Agg S Potos*

Ryan Coast installing gas flow meter for thermox.  
Will also install a bypass system when it is delivered.  
Heritage on-site. Patrick unable to perform compaction  
testing yesterday - to come out still

0940

Went to OFRA. Patrick and Heritage on site to  
perform compaction testing. MWH asked them  
to reschedule since MWH not notified and  
needs to GPS locations. Patrick + Heritage  
left site.

1000

Observed MWH perform sampling at MW29

1015

MWH collected VOC samples at MW29

1035

Roll 20 Photo 18 facing west showing  
MWH place pump into MW49

Observed sampling at MW49

1120

Roll 20 Photo 19 facing east showing MWH  
collecting SVOC samples at MW49

1200

Left site for lunch

1230

Return to site.

1300

Observed MWH perform gas sampling at  
MW49. MWH collecting MS/MSD at MW49  
for VOCs. C. Smith reported other team collecting  
MS/MSD for SVOC + ARSENIC. Went to  
trailer for weekly mtg.

1415

Weekly Construction Meeting. Attendees (x) on  
previous list plus:

*Agg S Potos*

(41)

3/21/02

*Agg S Potos*

Kevin Adler USEPA Rich Flores Austgen

Tom Timms MWH Todd Lewis MWH

R. Adams MWH (via phone) P. Vast MWH (via phone)

Sean Grady IDEM (via phone) R. Muckler MWH (via phone)

T. Klingforth MWH (via phone)

H.S: No incidents, MWH to conduct toolbox H.S mtg  
for drillers. Austgen completing electrical work

GWTR: 45 gpm - all ONCA and added FW20 from last week  
wells are currently cycling. ARD pumping PGLS + MWSO

ISVE: Austgen installing controls, Durr to be on site  
next week to replace parts and continue start-up.

GW sampling: water levels taken Monday. Sampling to  
be completed by end of day.

Look Ahead: well/piezometer abandonment - 3/26/02

Durr to complete training - ISVE to be on-line next week

Patrick/Heritage next week for compaction testing of OFRA

Next meeting: March 28, 2002 @ 10:00

1440 Weekly Construction Meeting Adjourns.

MSD found scrubber + thermox w/ K. Adler, T. Lewis + T. Timms

1510 Observed sampling at MWSO.

1540 Left site for day

*Agg S Potos*  
3/21/02

(42)

3/26/02 Jeff Sparto

0800 Arrive on-site, cloudy light snow. 26°F, light wind from north

Personal Present:

Lee Orosz	MWH
Tom Tines	MWH
Jerry Clark	Ryan
Todd Lewis	MWH
Rich Flores	Austgen
Leigh Peters	BUAPC

0815 Spoke with T. Tines. He reported that Austgen is working on controls and interface for OFCA ISVE system - hopes to have complete today or tomorrow. Durr to come today. Durr will reinstall replacement pH and conductivity probes. Durr to also install repaired pump. Ryan construction installing line from GWTP effluent to quench influent to recycle water. Ryan completed installing bypass valve on Thermox. Heritage and Patrick rescheduled for next Tuesday because of the weather. C. Smith to be on-site this afternoon ~ 12 PM with Mid-America Drilling to abandon MW18, P61, P62

0945 Durr Arrived on-site. Attended meeting with MWH, Austgen and Durr reviewing logic and controls for OFCA ISVE system

Jeff Sparto

(43)

3/26/02 Jeff Sparto

1105 Roll 20 Photo 20 facing southwest showing replacement pH and conductivity probes for scrubber system.

1120 Left site for lunch

1150 Return to site

1200 Mid-America Drilling on-site. C. Smith held briefing of activities and H+S Mtg.

1225 Roll 20 Photo 21 facing west showing piping for effluent to scrubber sump - discharge from GWTP to provide wash down and quench water in scrubber.

1240 C. Smith reported that he could not locate piezometer P62. In addition, C. Smith reported could not get GPS system to work.

1300 MWH and Mid-America located P62.

1320 Mid-America began abandonment activities at P61.

Roll 20 Photo 22 facing east of Mid-America filling piezometer with grout

C. Smith reported depth of P61: 12 feet.

1335 Roll 20 Photo 23 facing south of Mid-America filling P61 with bentonite grout after removing thermocouple pipe.

1340 P62 riser had been broken off. piezometer filled with solid Mid-America pumped grout

(44)

3/26/02

Jeff S. Pater

Roll 20 Photo 24 facing west of Mid America. Filling p22 with bentonite grout. Parameter is broken below grade. MWH left with hole topped off with grout.

1345 Returned to P61. Topped off with grout. broke PVC piping below grade. Mid America left unused grout northeast of MWH trailer in woods.

1400 Observed activities at scrubber. Replacement conductivity probe installed. Pump part replaced.

1500 Ryan began to remove flange to install T for GWTD effluent influent to scrubber. Liquid level in scrubber higher than flange location.

Ryan + MWH to purge tank - pH of liquid measured greater than SP at 12. MWH flushed arod. MWH and Ryan const put on gloves.

Asked T. Tinios about morning H<sub>2</sub>S training he reported that he still holds with Ryan Construction describing days activities. When pH probe installed - should be able to monitor. suggested that it should be measured for appropriate safety if scrubber tank to be purged.

1540 To MW18 to observe abandonment activities.

Jeff S. Pater

(45)

3/26/02

Jeff S. Pater

1545 C. Smith able to have tape extend to bottom of MW18. Mid America put tremie pipe to 22 feet & hit resistance at about 17 ft deep.

1555 - MWH decided to abandon MW18 using bentonite pellets.

Roll 20 Photo 25 facing southwest of Mid America. Filling MW18 with bentonite pellets and using tremie pipe to ensure that the pellets don't bridge. Mid America removed concrete slab surrounding well.

1605 Roll 20 Photo 26 facing southwest showing MW18 and concrete pad. MWH to cover with sand.

1610 Roll 20 Photo 27 facing southwest of cover over abandoned MW18. Filled depression with sand and covered with dirt from surrounding area.

1640 Left site for day.

Jeff S. Pater  
3/26/02



(46)

3/26/02

J. S. P. R.

0745 Arrived on site. Partly cloudy, 36°F wind from Southeast.

### Personnel Present

* Lee Cruise	MWH
* Rich Flores	Austgen
Mike Bristley	Austgen
Jeffrey Clark	Ryan
Randy McCain	Hentage
* Leigh Peters	BUSEC
* Tom Tines	MWH

0800 Spoke with T. Tines. His scheduled for next Tuesday, not today. MWH to have his blow out water from SVE-7, and to dig out scribe and re-pressure test line.

0920 Spoke with R. Flores regarding control system in OCH blowout shed. T. Tines discussed SVE 7 with MWS. His may be out on Monday if equipment available. Patrick still scheduled for Tuesday.

0930 Spoke with C. Daly and T. Tines. They reported that they will be operating and testing the communications between blowout shed and Thermo. To pull vapors from SVE-1, SVE-12 and SVE-14 with gate valves fully open. Asked about pH probe. MWH reported that it will manually monitor

J. S. P. R.

(47)

3/26/02

J. S. P. R.

of scrubber and will add caustic. Also asked T. Tines if his 40-hr training. He reported that he will have paperwork prior to starting work. Also asked if MWH to make his stay with his firm to work - T. Tines said yes. I expressed concern since MWH to be operating system start up of SVE system & will be working in pulling vapors from blowout shed.

1050 Left site to purchase camera

1105 Return to site.

0930 spoke with T. Tines regarding air monitoring. He reported no elevated readings observed in blowout shed except for ground gases absorption of blower. PID ~ 0.5 ppm ground gases not constant. MWH reported that vapors being sent to Thermo were at 4% of LEL and maxed out FID. Requested to be onsite next week to inspect pH probe. Dan Tabe and for training and system operation.

0945 His return to discuss activities. T. Tines requested 40 hr training cert.

1000 Weekly Construction meeting.

Attendees: \* on previous list plus <sup>as</sup> ~~the phone~~  
C. Daly MWH R. Adams MWH (via phone)  
Tom Lewis MWH (via phone)

J. S. P. R.

(48)

3/28/02

J. S. P. R. E.

K. Palmer USEPA (via phone)

Sean Brady IDEM (via phone)

H2S: minor incident on 3/26/02 with Ryan Construction to repair flange - pH of scrubber liquid at 12. Liquid drained into J. Clark boots causing redness. J. Clark ordered net gate doctor - MWH to fill out report. High pH caused by check valve that was still open because of debris. Siphoning action continued to add caustic to liquid. pH meter failed. MWH to develop protocols for working on scrubbers.

GWIP: Operating 45 gpm. pumping from EW's 11, 12, 10, 15, 16, 17, 18, 19. Had 200 and 208 next week. Liquid level too low in 13A and 20C to pump from those wells.

ISVE: Operated System 30-60 minutes yesterday. Due to be onsite Monday for training and assist. completion. Rosemont - onsite Monday to check pH probe. Austgen to have small controls in place today for auto mode. Will have screen made tomorrow. to simulate failures to test emergency shutdown sequence. HIS out today for SVE-07. Will start work on Monday. Patrick

J. S. P. R. E.

(49)

3/28/02

J. S. P. R. E.

to perform completion testing Tuesday

GWIP: Sampling completed 3/21. Abandoned well and fix connector on 3/26.

CFCA CARE: HIS + Patrick out next week.

Next meeting - 4/4/02

1055 Meeting Adjourn

1350 Spoke with Larry Campbell regarding activities.

1550 Left site for lunch

1720 Return to site

1750 Checked MWH and Austgen work on controls

MWH waiting for Austgen to complete controls to start up system.

1850 MWH and Austgen to begin operating ISVE system

1900 Went to OPCA blower shed

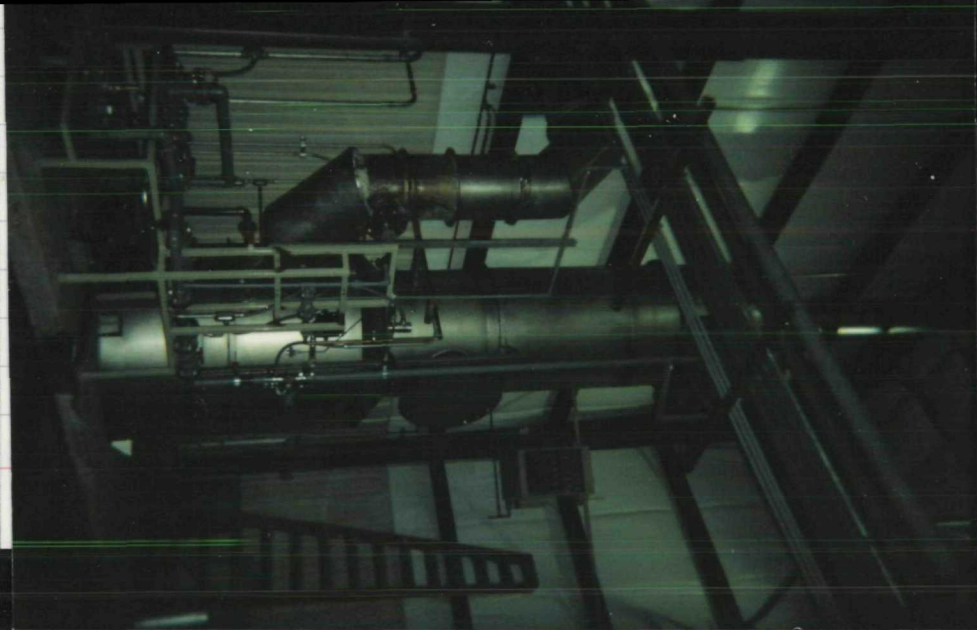
1925 RCH21 photo facing northeast of T. Turbine & controls for blower inside blower shed.

1935 Austgen trouble shooting controls - blower not starting from touchscreens - wiring to blower not connected. Austgen to connect temporary wiring for testing purposes to later add permanent

1940 Austgen permanently connecting wiring to start blower. MWH reported that they will not send reports until tomorrow. MWH and Austgen to verify interlocks today

1955 Left site for day

J. S. P. R. E.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #1

Date: 3-7-02 Time: 09:30

Photographer: Leigh Peters

Description: Photo facing south showing scrubber installed in the groundwater treatment plant (replaces Roll 19 Photo #7)

Site: American Chemical Services, Inc.

Proj. #: 46526

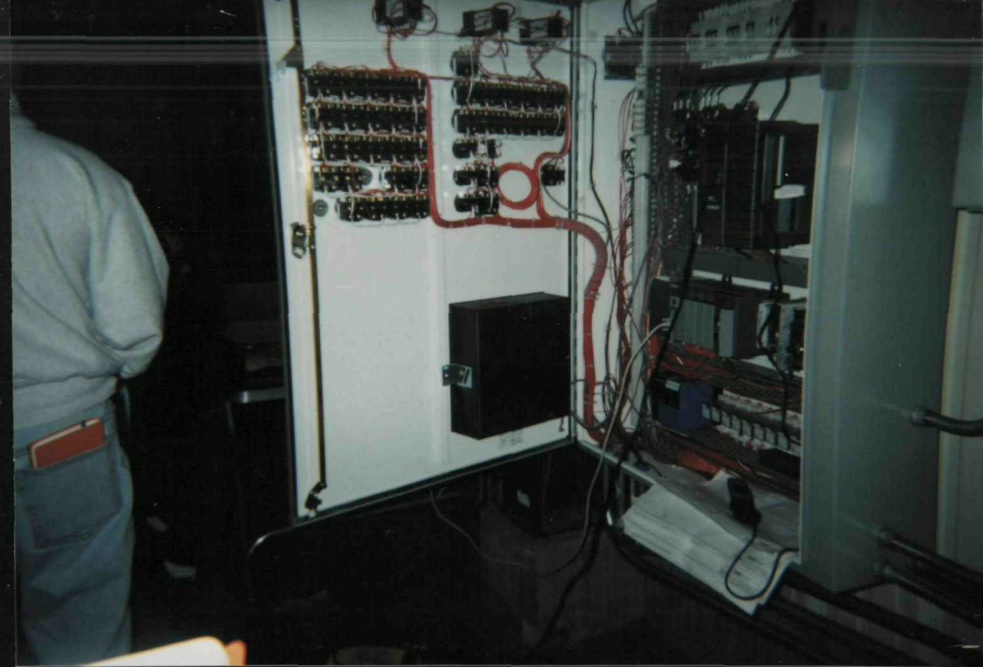
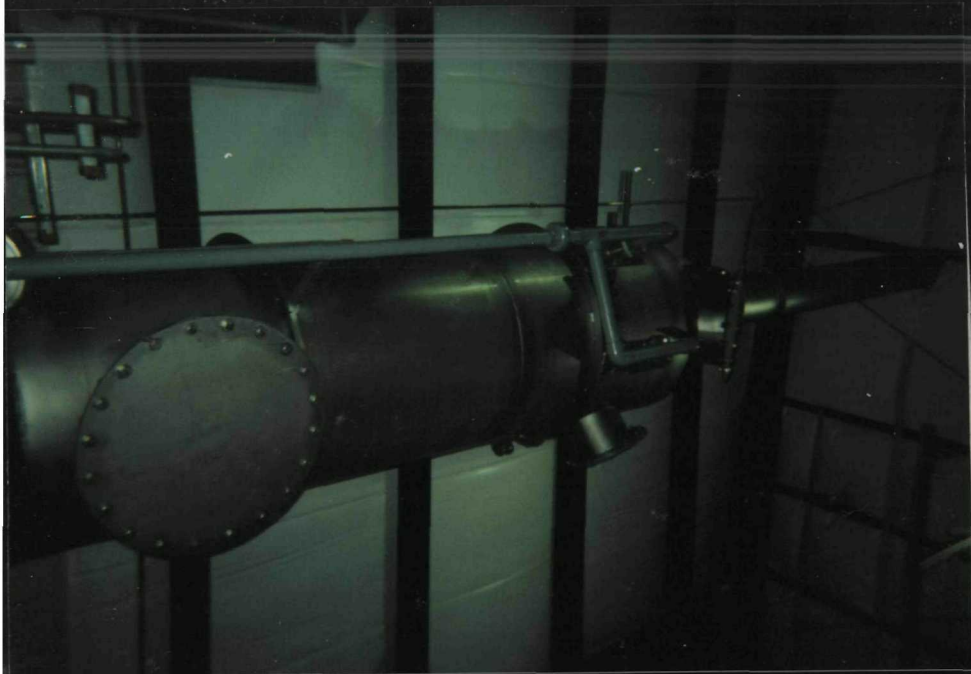
Roll: 20 Photo #2

Date: 3-7-02 Time: 09:30

Photographer: Leigh Peters

Description: Photo facing south showing the base of the scrubber installed in the groundwater treatment plant (replaces Roll 19 Photo #4)





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #3

Date: 3-7-02 Time: 09:30

Photographer: Leigh Peters

Description: Photo facing south showing the top of the scrubber and stack installed in the groundwater treatment plant (replaces Roll 19 Photo #5).

Site: American Chemical Services, Inc.

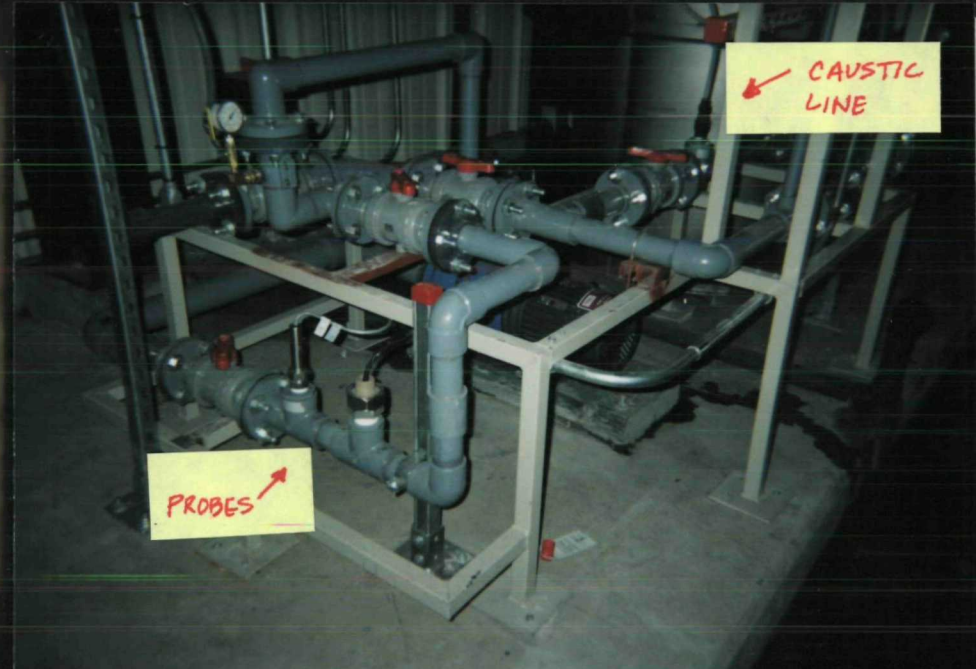
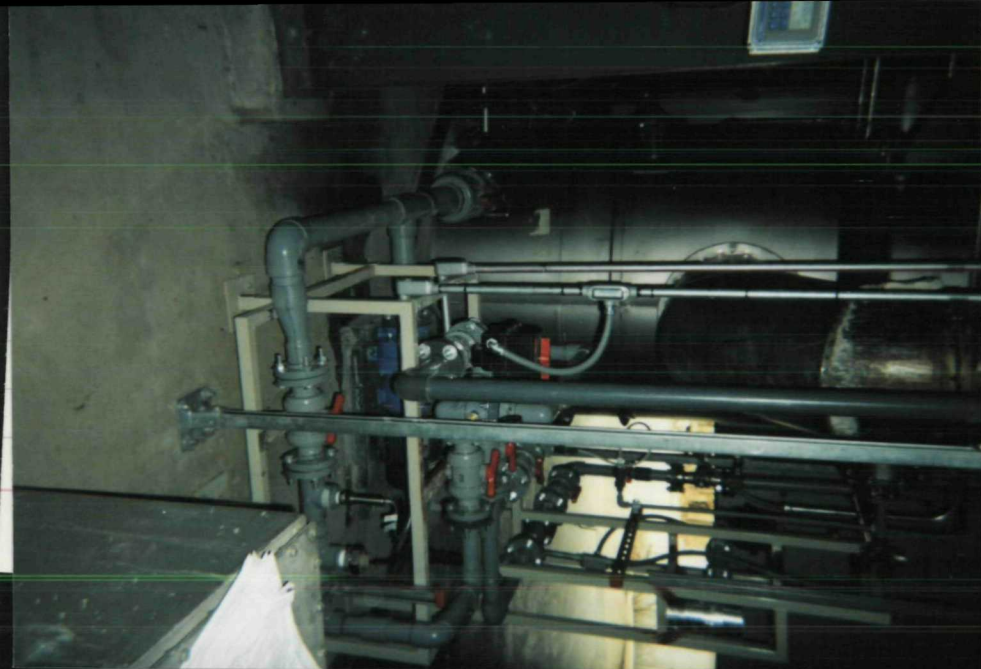
Proj. #: 46526

Roll: 20 Photo #4

Date: 3-7-02 Time: 09:35

Photographer: Leigh Peters

Description: Photo facing southeast showing the PLC for the thermal oxidizer and scrubber system.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #5

Date: 3-8-02 Time: 11:00

Photographer: Leigh Peters

Description: Photo facing west showing piping at the scrubber.

Site: American Chemical Services, Inc.

Proj. #: 46526

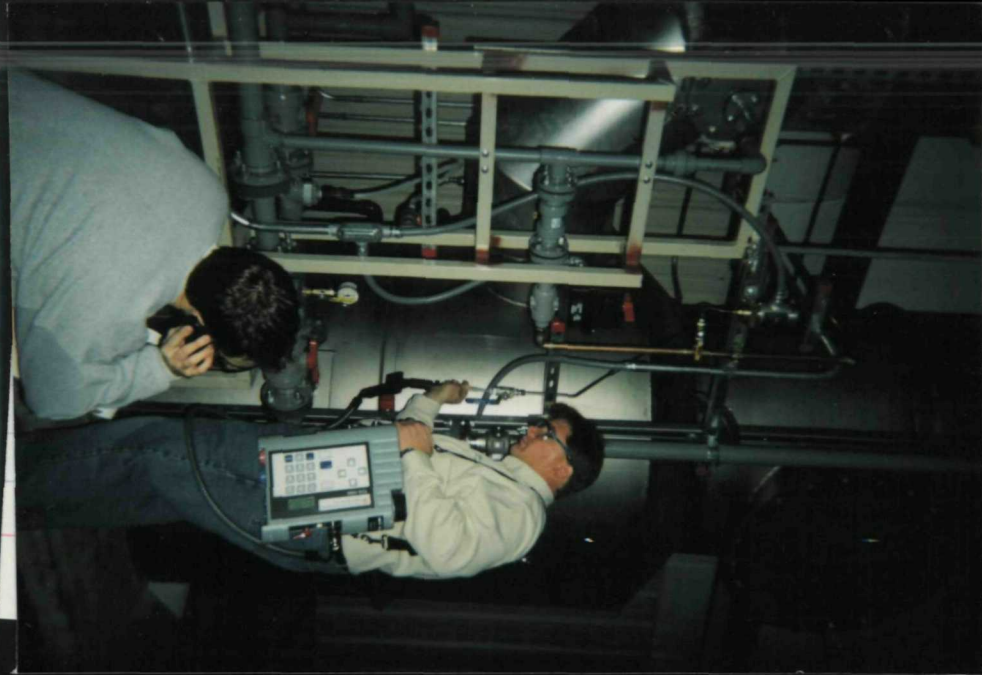
Roll: 20 Photo #6

Date: 3-8-02 Time: 11:05

Photographer: Leigh Peters

Description: Photo facing west showing pH and conductivity probe locations and the location of the caustic feed line (See arrows).





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #7

Date: 3-12-02 Time: 08:10

Photographer: Leigh Peters

Description: Photo facing east showing the blower and inside of the blower shed (replaces Roll 18 Photo #5)

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #8

Date: 3-12-02 Time: 09:40

Photographer: Leigh Peters

Description: Photo facing southwest of MWH sampling for VOCs at the scrubber effluent with the FID prior to pulling vapors from the OFCA ISVE blower.



Site: American Chemical Services, Inc.

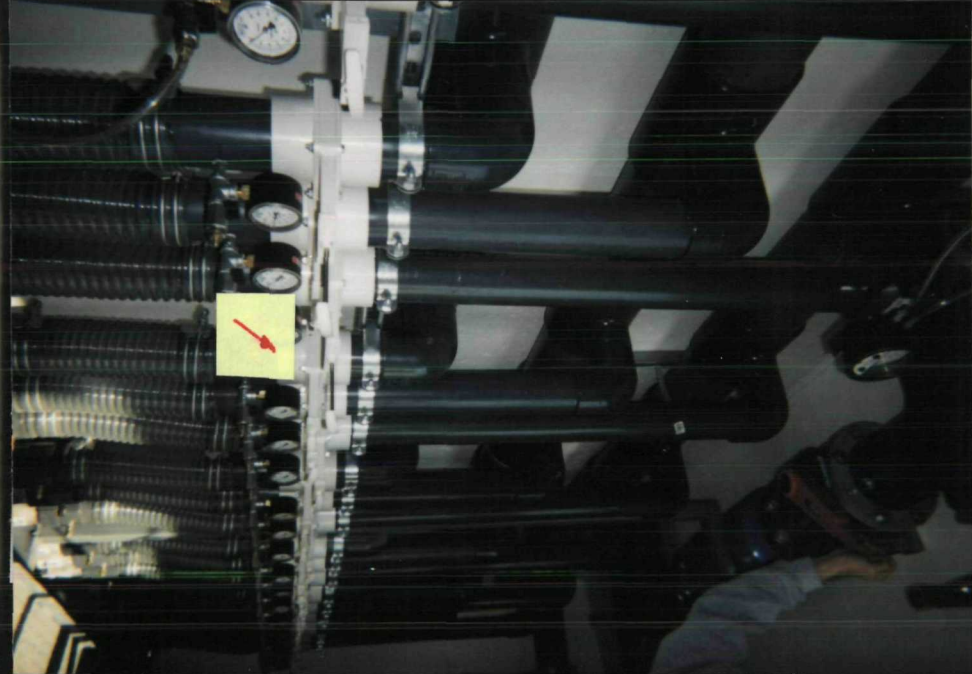
Proj. #: 46526

Roll: 20 Photo #9

Date: 3-12-02 Time: 09:50

Photographer: Leigh Peters

Description: Photo facing southeast showing MWH purging and recording field measurements at MW-17 during well redevelopment.



Site: American Chemical Services, Inc.

Proj. #: 46526

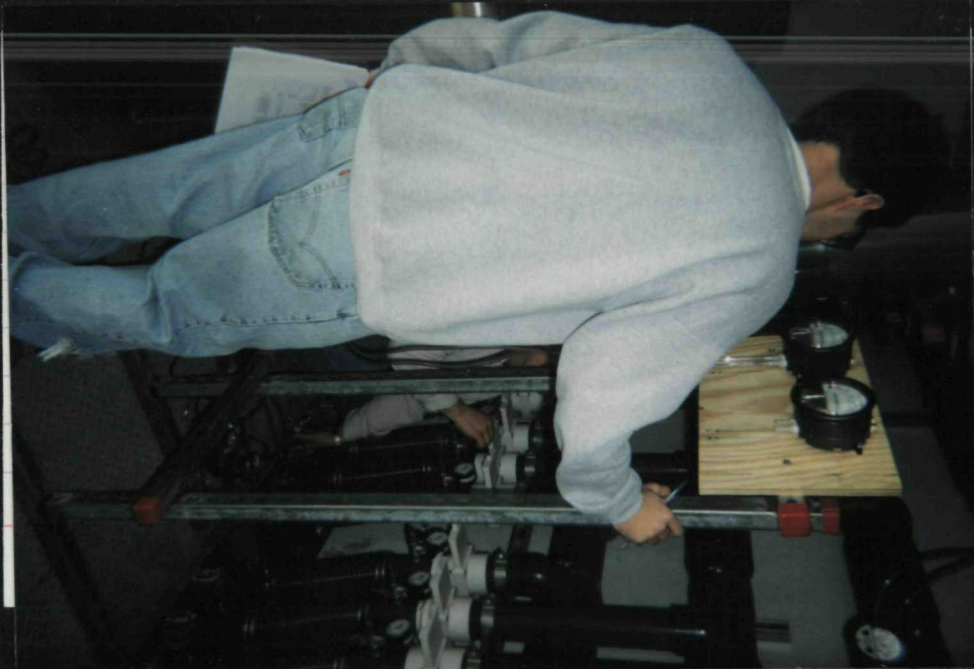
Roll: 20 Photo #10

Date: 3-12-02 Time: 14:10

Photographer: Leigh Peters

Description: Photo facing northeast showing MWH closing the ambient air valve in the blower shed. Note the open gate valves at the well piping connections (Arrow).





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #11

Date: 3-12-02 Time: 15:15

Photographer: Leigh Peters

Description: Photo facing northwest showing MWH measuring the differential pressure and flow rate at SVE-14.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #12

Date: 3-14-02 Time: 08:50

Photographer: Leigh Peters

Description: Photo facing west showing the overflow system for the scrubber unit. Note acidic liquid present in the overflow piping (Arrow).





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #13

Date: 3-14-02 Time: 08:50

Photographer: Leigh Peters

Description: Photo facing south showing the acidic overflow dissolving the concrete pad and flooring.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #14

Date: 3-14-02 Time: 09:05

Photographer: Leigh Peters

Description: Photo facing southwest showing cones placed around acidic overflow water and MWH rinsing the area with clean water.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #15

Date: 3-19-02 Time: 07:25

Photographer: Leigh Peters

Description: Photo facing northwest showing MWH calibrating the flow through cells and turbidity instrument for the groundwater sampling event.



Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #16

Date: 3-19-02 Time: 08:25

Photographer: Leigh Peters

Description: Photo facing west showing MWH collecting field parameters during sampling activities at MW-11.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #17

Date: 3-19-02 Time: 09:35

Photographer: Leigh Peters

Description: Photo facing southwest showing MWH collecting samples for VOC analysis at MW-11.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #18

Date: 3-21-02 Time: 10:35

Photographer: Leigh Peters

Description: Photo facing west showing MWH placing Grunfos pump into MW9R.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #19

Date: 3-21-02 Time: 11:20

Photographer: Leigh Peters

Description: Photo facing east showing MWH collecting groundwater for SVOC analysis at MW9R.

Site: American Chemical Services, Inc.

Proj. #: 46526

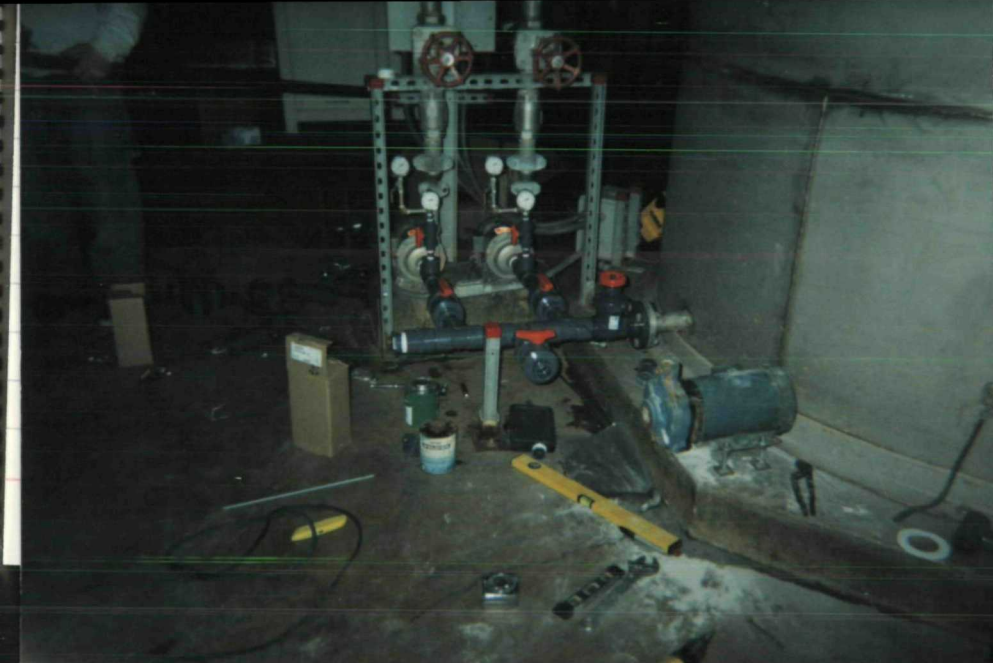
Roll: 20 Photo #20

Date: 03-26-02 Time: 11:05

Photographer: Leigh Peters

Description: Photo facing southwest showing the replacement pH and conductivity probes to be installed in the scrubber system.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #21

Date: 03-26-02 Time: 12:25

Photographer: Leigh Peters

Description: Photo facing west showing the piping for the GWTP discharge effluent to recycle to the scrubber as quench and wash water.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #22

Date: 03-26-02 Time: 13:20

Photographer: Leigh Peters

Description: Photo facing east showing Mid-America Drilling filling piezometer P61 with bentonite grout through a tremie pipe.





Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #23

Date: 03-26-02 Time: 13:35

Photographer: Leigh Peters

Description: Photo facing south of Mid-America  
Drilling filling piezometer P61 with  
bentonite grout after removing tremie  
pipe.

Site: American Chemical Services, Inc.

Proj. #: 46526

Roll: 20 Photo #24

Date: 03-26-02 Time: 13:40

Photographer: Leigh Peters

Description: Photo facing west of Mid-America  
Drilling filling piezometer P62 with  
bentonite grout. PVC riser was broken  
below ground surface.





Site: American Chemical Services, Inc.

Proj. # 46526

Roll: 20 Photo #25

Date: 03-26-02 Time: 15:55

Photographer: Leigh Peters

Description: Photo facing southwest of Mid-America Drilling filling MW18 with bentonite pellets and using tremie pipe to ensure that bridging did not occur.

Site: American Chemical Services, Inc.

Proj. # 46526

Roll: 20 Photo #26

Date: 03-26-02 Time: 16:05

Photographer: Leigh Peters

Description: Photo facing southwest showing MW18 filled with bentonite pellets and the concrete slab removed from around the well (placed on drill rig).



Site: American Chemical Services, Inc.

Proj. # 46526

Roll: 20 Photo #27

Date: 03-26-02 Time: 16:10

Photographer: Leigh Peters

Description: Photo facing southwest of cover placed  
over abandoned MW18.